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JANUARY 2004

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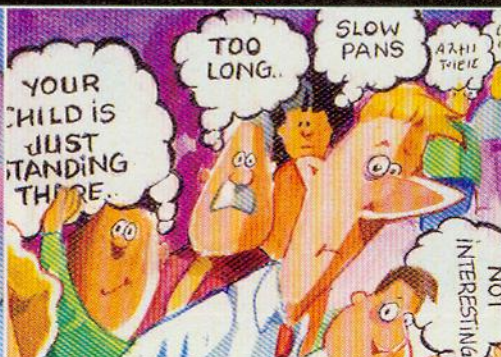
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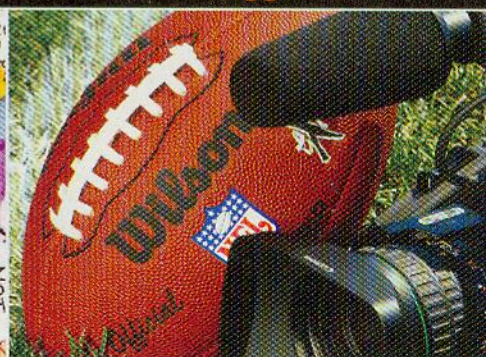
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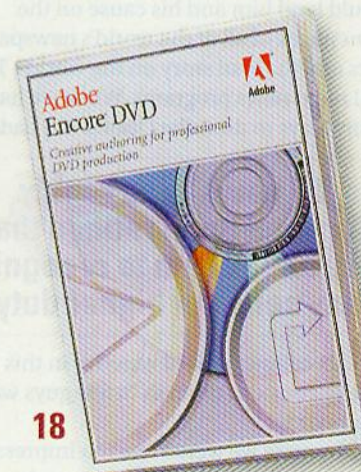
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► IN BOX

from Videomaker Readers

For shame *Videomaker*, you
used to be the best. You are
now a "consumer" item.

— Greg Schmieg, Internet



Is "consumer" a Dirty Word?

I am a long time reader, though I canceled my subscription because of your constant inaccuracies like the following.

In the article "Is 24P for me?" by D. Eric Daniels [sic], he cites the new Panasonic camera as being a "Consumer" camera. Now this is just plain old wrong, and he's obviously not doing his homework before writing. Panasonic advertises the AG-DVX100 on their Pro Camera page. In no reference to the 24P camera have I ever heard the word consumer. The GL1 or GL2 is a prosumer camera, in that it can be used for home use, or pro use if you are on a budget. This is gray area. There is no gray area in regards to the AG-DVX100. They are continually being used by broadcast networks, along with independent filmmakers, and are not considered to be consumer items.

I don't know about you, but I've never seen a "consumer" camera with XLR inputs supplied with phantom power... I will now do my reading with a magazine that actually knows the difference between pro and consumer equipment, and bothers to check their facts before printing. For shame *Videomaker*, you

used to be the best. You are now a "consumer" item.

Greg Schmieg
Internet

Our apologies, Greg: the AG-DVX100 does indeed come from Panasonic's Broadcast and Professional Video division, not their consumer division. That was a mistake, and we apologize for it. Let us be quick to point out, however, that we think the AG-DVX100 offers its package of pro features at a price similar to camcorders issued by consumer divisions, and by companies that have no such divisions. We think this is something to celebrate, which is why we gave the camera one of our Best Products of the Year awards.

—The Editors

We Didn't Do Magic

I appreciate *Videomaker*'s article titled The Magic Boxes (October 2003), which reviewed the top editing appliances on the market today.

However, I was surprised with the title "Magic Boxes" that Applied Magic's ScreenPlay was not even mentioned. The article stated that

Continued on page 95 ►

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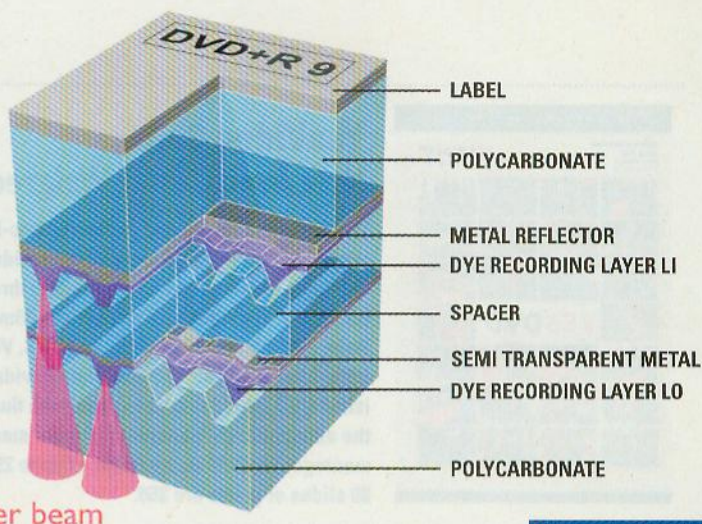
▶ ZOOM IN

by Charles Fulton

DVD+RW Alliance Demonstrates Dual-Layer DVD+R

In a move to double the capacity of recordable DVDs, Philips and MKM (Mitsubishi Kagaku Media)/Verbatim have announced a version of the DVD+R recordable DVD format that includes two layers, allowing for recording of up to 8.5GB of data on a single disc. The discs use two discrete organic dye layers separated by a spacer layer, along with a reflective layer and a partially reflective layer.

The technology was demonstrated at the CEATEC show that was held October 7-11, 2003 in Makuhari Messe, Chiba, Japan. According to the DVD+RW alliance, the recorded discs retain compatibility with the existing base of set-top DVD players. Dual-layer drives will hit store shelves in April.



Laser beam



Media 100ⁱ Announces Support for G5, Mac OS X 10.3

The latest company to jump on the Power Mac G5 bandwagon is Media 100, who has announced that Media 100i version 8.2.1 will support the Power Mac G5 as well as Mac OS X 10.3. Complete turnkey systems with the new OS will ship in November.

"The Apple Power Mac G5 systems represent a leap ahead in performance for our editors... We are pleased that again Media 100 i will be among the first, if not the first, to adopt and exploit Apple's latest CPU and OS advances," stated Mike Savello, Media 100's vice president of dual stream systems.

Pinnacle Announces InstantCD/DVD, Instant VideoAlbum

Pinnacle Systems has launched two new Instant titles, which provide simple disc authoring capabilities. Pinnacle Instant VideoAlbum includes DV capturing, editing, menu creation and burning capabilities. The software also imports still images and includes label creation features. Instant VideoAlbum retails for \$40.

Pinnacle InstantCD/DVD version 8 includes CD and DVD duplication capabilities and can author audio CDs, MP3, photo and video discs. Backup and restore capabilities are also included with Instant CD/DVD 8, which retails for \$80.



Avid Ships New Version of Free DV and Xpress DV

Have you ever wanted to try out an Avid system for free? Avid announced Avid Free DV (www.avid.com/freedv), which is a limited version of Avid's Xpress software that you can download free of charge. It runs on both the Mac OS X and Windows XP platforms and features the same Avid editing interface as high-end Avid tools.

Avid has also shipped a new version of Xpress DV. Like previous versions, the new version also runs on both Windows and Mac platforms, including the Power Mac G5.

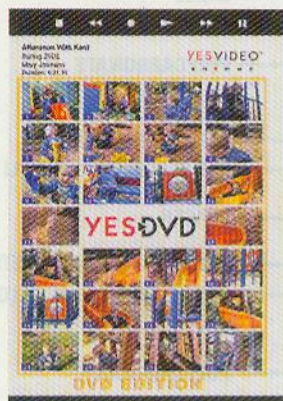
Avid Xpress DV has over 100 real-time effects, including automatic color correction, moving titles and picture-in-picture effects. The software comes with Boris Graffiti LTD title creation and animation software, Sorenson Squeeze 3 Lite encoding software for Windows Media 9, QuickTime, Flash and MPEG-2 formats and Sonic Solutions DVDit! SE DVD authoring software.

The software retails for \$695. Upgrades are available to existing, non-educational users of Xpress DV for \$295.



▶ QUICK FOCUS

by Charles Fulton



YesVideo Service Now Available at Walgreens

YesVideo, the video- and photograph-to-DVD transfer service available through drug stores nationwide, has announced that YesVideo services are now available through Walgreens' 4,200 US stores. YesVideo will accept any 35mm slides and prints; 8mm, Super 8 and 16mm film; and VHS, VHS-C, S-VHS, consumer Beta, Mini DV, 8mm, Hi8 and Digital8 videocassettes. The finished DVD includes a keep case with thumbnail images keyed to the automatically-generated chapter marks, as well as a music montage. YesDVD conversions of up to 250 feet of movie film or 80 slides or prints are \$50.

OUTTAKE

Making movies is my vacation. All the rest - the traveling about to premiers, the social life, the endless arguments with producers who don't understand me - that is the work.

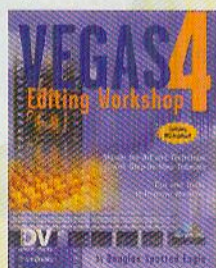
— Federico Fellini, movie director

▶ REVIEWS

by Charles Fulton

Vegas 4 Editing Workshop

Douglas Spotted Eagle (2003, CMP books, www.cmpbooks.com. 428pp with CD-ROM, \$50)



Vegas power-user and instructional media expert Douglas Spotted Eagle has written an incredibly thorough book in *Vegas 4 Editing Workshop* that shows readers everything they'll ever need to know about Sony Pictures' newly-acquired flagship video editing software title. From setting up your computer to run Vegas, capturing footage and working with the timeline, to working with audio, compositing, color correction and out-

putting projects via tape, disc and streaming media formats, it's all here in great detail. The book provides an impressive and very useful array of background material to help readers understand why particular features and parts of the process are the way they are. *Vegas 4 Editing Workshop* is very hands-on and remains accessible, taking readers carefully through procedures to get the best results possible. **5**

Writing the Comedy Film

Stuart Voytilla and Scott Petri (2003, Michael Wiese Productions, www.mwp.com. 215 pp., \$15)



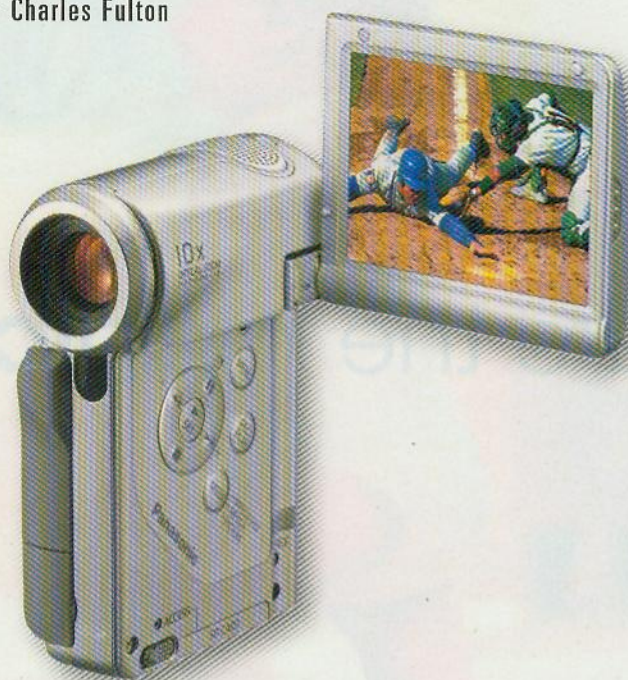
Anyone looking for help honing their ability to write humor will find *Writing the Comedy Film* a useful reference. The book uses examples from preeminent screenwriters, such as Kevin Smith (Clerks) and Woody Allen (Annie Hall). The book references a broad collection of films, analyzing their collective comedic merit, as well as other examples of excellent writing. The various comic

genres are all here: romantic comedies, black comedies, mockumentaries, parodies, satires, farces, ensemble comedies, teen comedies, sports comedies and more. Voytilla and Petri also explore some of the deeper elements of making comedy work as a helpful backgrounder. Definitely worth a look. **4**

KEY TO RATINGS 5 EXCELLENT 4 VERY GOOD 3 GOOD 2 NOT SO GOOD 1 POOR

► NEW GEAR

by Charles Fulton



Lil' Fella

Panasonic's SV-AV100 is a compact SD Card camcorder that records JPEG photos, MPEG-4 video and DVD-quality MPEG-2 video. The unit features a 10x variable-speed optical zoom, electronic image stabilization and a 2.5-inch LCD viewfinder. The included 512MB SD card can record up to 10 minutes of 6Mbps MPEG-2 video or 20 minutes of 3Mbps video.

(800) 211-PANA

► www.panasonic.com

Suggested Retail Price:

\$1,000



Super nNovia

nNovia's QuickCapture A2D captures DV streams as Type-2 AVI files that can be edited directly on a computer. It can also function as a capture device for analog video, as well as play back any captured video through its analog video output. Built-in rough-cut logging simplifies tape logging, allowing important takes to be marked while shooting.

(408) 436-1486

► www.nnovia.com

Suggested Retail Price:

Starting at \$1,399



Smart Discs

SmartSound has announced five new CDs in its Movie Music library, including a second Blockbuster disc, a second Vacation disc and new Christmas, Comedy and Memories discs. Each disc includes 10-12 tracks of music and works with SmartSound's Movie Maestro software to easily customize the music to any length.

(800) 454-1900

► www.smartsound.com

Suggested Retail Price:

\$30 per disc

To the Xtreme

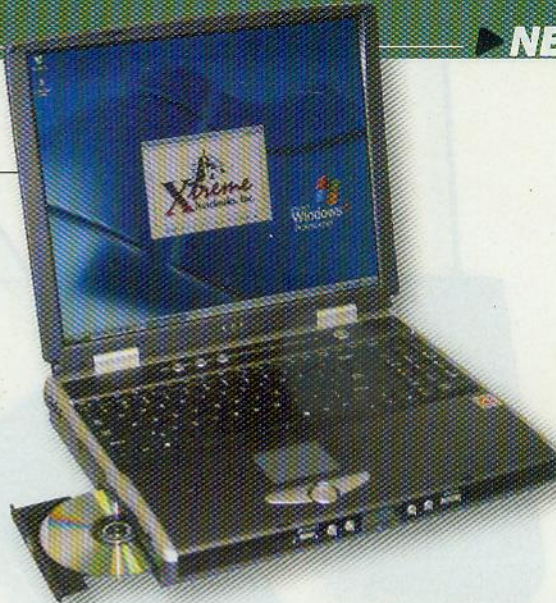
Xtreme Notebooks' Prostar 8814 is among the first notebook computers to include an Intel P4 processor with a 800MHz front side bus. It also includes a 16-inch TFT LCD display with an ATI Mobility Radeon 9600 PRO graphics. The machine also includes built-in FireWire and is available with a Hitachi 7,200 rpm notebook hard drive.

(888) 877-8587

✎ www.xtremenotebooks.com

Suggested Retail Price:

Starting at \$1,969



DVD Burning 106

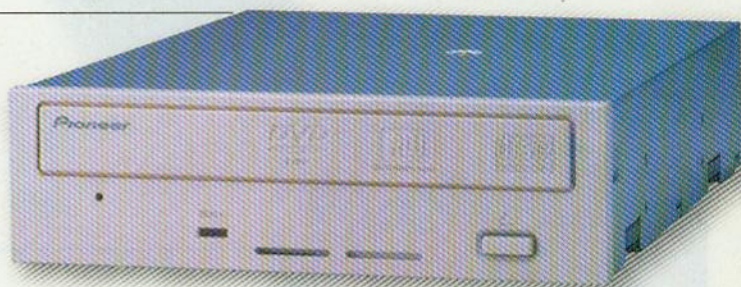
Pioneer's first DVD burner that burns both DVD-R/RW and DVD+R/RW discs, the DVR-A06, burns DVD-R/RW discs at 4x, DVD-RW discs at 2x and DVD+R/RW at 2.4x, as well as CD-R at 16x and CD-RW at 10x. The unit includes a 2MB buffer, and includes buffer underrun protection.

(310) 952-2000

✎ www.pioneerelectronics.com

Suggested Retail Price:

\$329



More Time for Other Things

WorldTech's new Specialist MediaStudio Pro keyboard works specifically with Ulead MediaStudio Pro. A version for Sony Pictures Digital's Vegas 4.0 editing software is also in the works. The keyboard features laser-etched and colored keys. WorldTech claims an average time savings of 43% on a typical editing project when the Specialist keyboard is used.

(877) 888-1400

✎ www.worldtechdevices.com

Suggested Retail Price:

\$99



More Pixels!

Sony's DCR-PC330 Mini DV camcorder is the first 3.0 megapixel camcorder. Its optical system includes a 10x optical zoom, a ring-controlled manual focus and utilizes a unique primary color filter, which improves the quality of captured video and still images. The camera features a 2.5-inch Touch Panel LCD viewfinder. The PC330 weighs just over one pound with its battery installed.

(800) 222-SONY

✎ www.sonystyle.com

Suggested Retail Price:

\$1,700





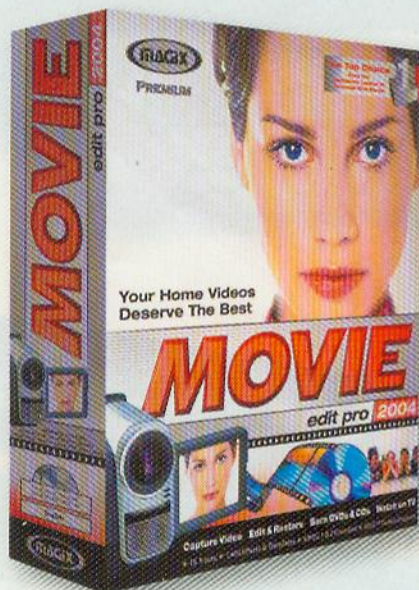
Testing, 1, 2, 3

Azden's 100LT on-camera UHF wireless microphone system consists of the 100UPR true-diversity receiver and the 100BT body-pack transmitter. The system can utilize any of 63 channels between 794 and 806MHz. The transmitter works with any microphone with a 3.5mm jack. The transmitter and the receiver both measure 3 7/8 (H) x 2 3/8 (W) x 13/16 (D) and each can last as long as eight hours on a single 9V battery.

(516) 328-7500

► www.azden.com

Suggested Retail Price:
\$450



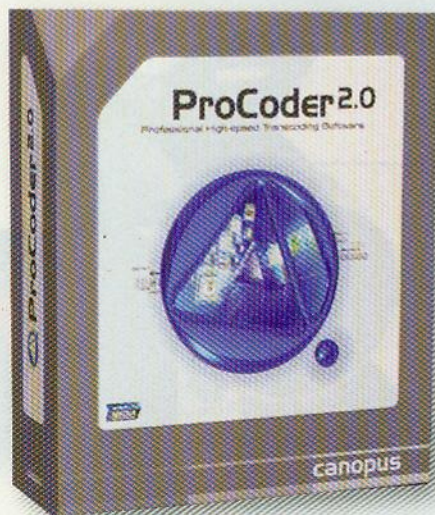
Magic Editing

MAGIX Movie Edit Pro 2004 includes batch capture and scene detection as well as real-time video effects and transitions. The program also offers compositing and motion stabilizing capabilities. It can output to DV AVI, Windows Media 9, MPEG-1 and MPEG-2 natively, with MPEG-4 and DivX possible when the appropriate codecs are installed.

(888) 866-2449

► www.magix.com

Suggested Retail Price:
\$100



Code with the Pros

Canopus has released the latest version of ProCoder, which adds Flash and DivX output, as well as the ability to schedule transcoding jobs for times when the system is idle and a feature that watches folders for new files to be processed. ProCoder continues to support an impressive slate of existing formats as well.

(888) 899-EDIT

► www.canopus.us

Suggested Retail Price:
\$499

Reader Ratings

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▶ TEST BENCH

Adobe Encore DVD Authoring Software

Author! Author!

by D. Eric Franks

\$549

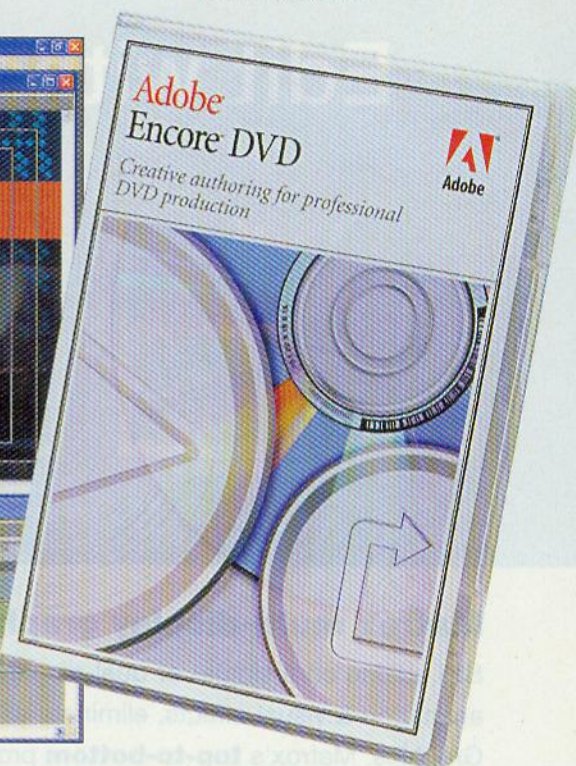
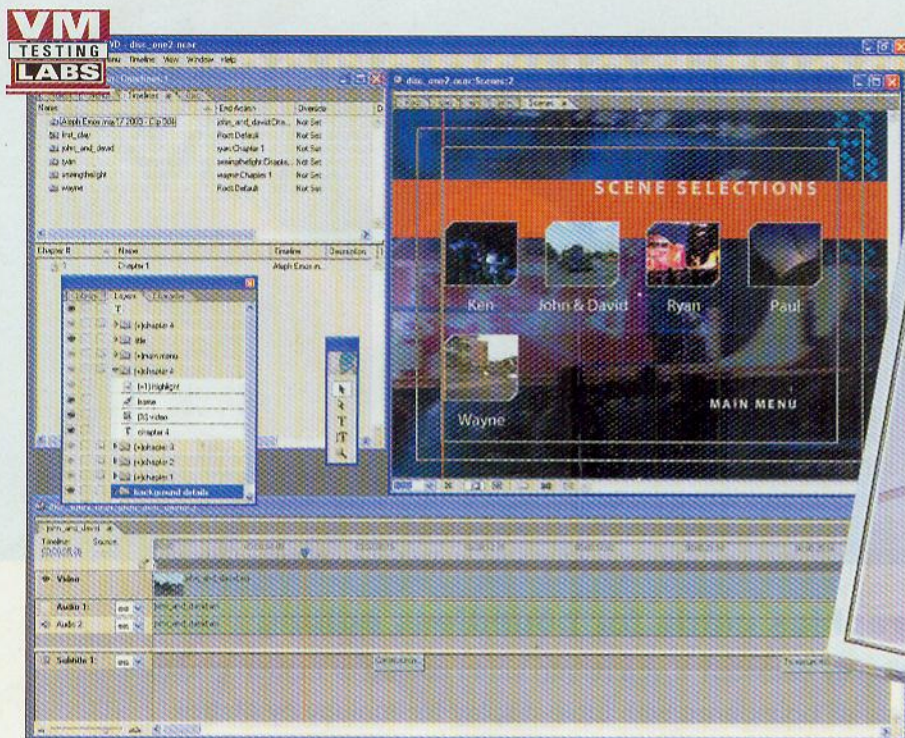
Adobe Systems Inc.

345 Park Ave.

San Jose, CA 95110

(888) 724-4508

> www.adobe.com



We've been working hard with Encore for over a month now. It is a good app for the non-Hollywood professional market, with its primary strength being its integration with Adobe's other apps (Premiere, Photoshop, etc.). Encore is a Windows XP-only product. Macfictionados and Windows 2000-based production houses are out of luck. It's not yet perfect, but if you live, work and breathe Adobe, Encore is the DVD authoring app you have been waiting for.

Features

Feature-wise, Encore is well equipped, but not exceptional. It'll do all of the basics: MPEG encoding, stereo Dolby Digital encoding, motion menus, burning and so on. For professionals who create thousands of DVDs through a dupe house, you can output to DLT, which is a critical feature. It also has some advanced (but not unique) features, such as inte-

grated subtitling, multiple video tracks (for multi-camera productions) and multiple audio tracks (for other languages).

Interface

The user interface is clean and functional, which is about the highest compliment we can give any program. It's not intuitive the first time you run it, but we found that new users who are familiar with the basics of DVD authoring can be productive within an hour. The organization of the tabbed project window and the disc timeline are very straightforward. The more advanced windows, especially the project properties and management tools, are all very informative and accessible.

Designing the navigation of your disc is a good example of the overall workflow. Encore doesn't use a flowchart layout to graphically represent disc structure, which is a feature we really like

in Sonic ReelDVD (and upstart Media-Chance DVD-lab) and which we sadly miss in the new version of Apple's DVDStudio Pro 2. To link a submenu to a button on the root menu in Encore, all you need to do is drag the submenu from the list in the Project window to the button that you want to link it to. When you select a menu or menu object, its properties are listed in the Properties window, which is a very common behavior across many design environments, from soft-

STRENGTHS

- Tight Adobe integration
- Clean interface
- Smooth workflow

WEAKNESSES

- Windows XP only
- No templates

ware programming to Web design. In the Properties window, you can verify a button's link to the submenu or manually enter a different link. Automatic inter-menu navigation between buttons worked very well and it wasn't too difficult to manually change the button order in our menus.

While the technical side of DVD creation can be intimidating, it shouldn't be confusing, and Encore does a fine job of keeping your projects together in a logical way. The fun side of DVD authoring is layout and design, however, and this should primarily be an artistic challenge.

Photoshop for Menu Design

Encore behaves a bit like Photoshop UltraLight for menu design, especially in its use of layers. If you already use Photoshop, even casually, many of the con-

cepts of graphical layout and design in Encore will be familiar to you. Encore works just fine all by itself for menu design, but it is not Photoshop.

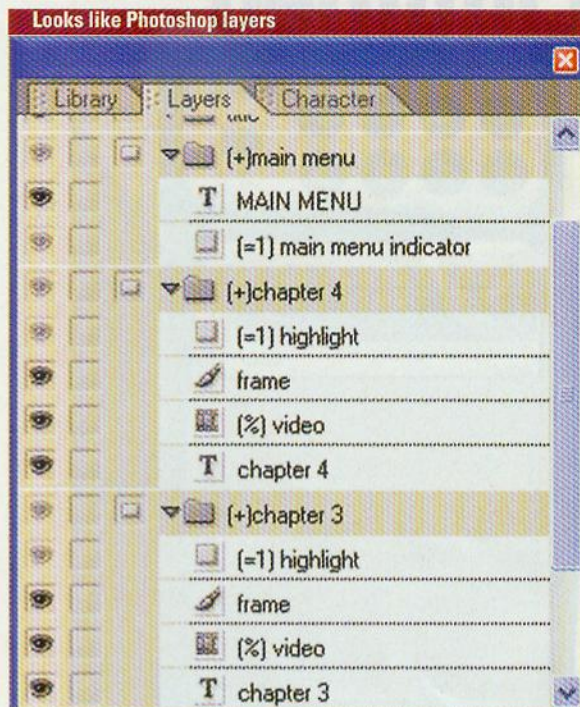
is where you will actually create your menus. This allows artists who are comfortable with Photoshop to work with a tool they already know. Once the menus are done, the Photoshop files are essentially Encore-ready drag-and-drop templates.

Perhaps the coolest aspect of this process is that all of the layer properties (e.g. transparency) and filters in Photoshop are applied to the DVD menus, including any video files that are used as motion menus or motion buttons in Encore. So now you can use Photoshop filters on your video.

First Gen in Action

Even if you are a one-person shoot-edit-author production studio (and many of us are), the workflow from Encore to Photoshop and back to Encore is brilliant. You don't even need to close (in Encore), open (in Photoshop), edit, save, close and re-open (in Encore again) menus: the two products really act as one.

The first version of Encore is not perfect. We've been working the app quite hard and have experienced a couple of crashes, but nothing that has caused us to loose any work. We were surprised to see a tiny bug in the release version that was not in the beta: the pixel aspect ratio button on the Preview window was broken. This minor problem has probably been fixed by the time you read this, but we mention it here to illustrate that this is the sort of imperfection that we'd expect from a first-generation application. Overall, the program is very stable, however, and we



are really talking about rare and spurious events that are not in any way interfering with our everyday commercial production work.

Astonishingly Aggressive

Lack of templates seems to be the most serious limitation of this product for casual home users, but for professionals (or even part-time weekend shooters, folks with paying day jobs and wannabe pros), Encore is a tool worth learning. Adobe's astonishingly aggressive authoring bundling of Encore and Photoshop in the \$800 Video Collection make this one scary software suite for the competition (Oh, yeah: toss in Premiere Pro, After Effects and Audition at that price, too). ■

SUMMARY

Encore and Photoshop combine as an authoring dream for Adobe fans.

D. Eric Franks is Videomaker's Technical Editor.

Reader Ratings

Tell us what you think. Rate this article online at www.videomaker.com/readerratings Article #9812

TECH SPECS

Version	1.0.0.38189
Platform	PC
Operating System	Windows XP
Processor	PIII 800MHz
RAM	256MB
Hard Disk	500MB
Additional Requirements	1280x1024 display, DVD-ROM drive
MPEG Encoding	MainConcept
Audio Encoding	PCM, MPEG, 2-channel Dolby Digital
Printed Manual	155 pages
Demo Version	30-day trial, watermark
Upgrade	not applicable

▶ TEST BENCH

DVS Direct Pinnacle Liquid Edition Pro Turnkey Editing System

by D. Eric Franks

Liquified

\$2,995

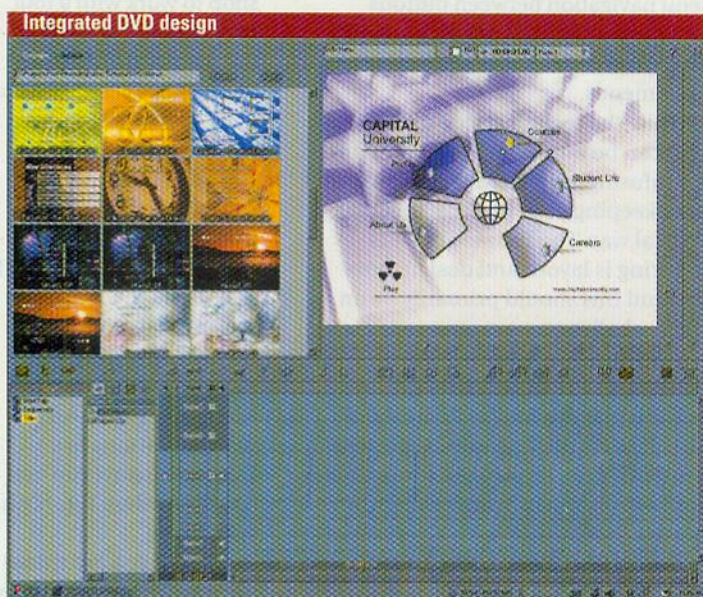
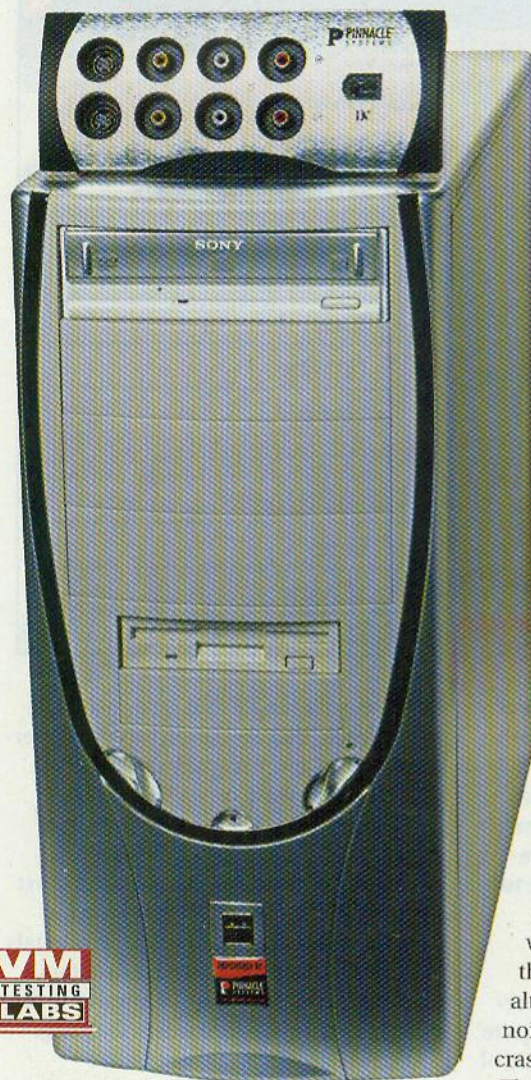
DVS Direct

69 Beaver Dr.

DuBois, PA 15801

(800) 379-7267

> www.dvsdirect.com



ply, attractive (but not gaudy) case, the Intel 845GE chipset, the DDR400 RAM and the Sony DRU500A DVD-RW/+RW drive are all quality components. The only aspect of this computer that we were not enthusiastic about was the noise level of the case fans, although we'd rather have a stable/noisy/cool machine instead of a crashy/quiet/hot computer.

The new Liquid Edition Pro hardware-assisted rendering card struck us as unusual at first, since it sits in the AGP slot in the computer (instead of a standard PCI slot) and is the primary display device. Pinnacle has leveraged the graphics processing power of ATI's excellent Radeon 8500. It is surprising, for whatever reason, that most other video software companies have not yet used the sophisticated GPU on 3D gaming cards to better advantage. The only downside to this particular card is that you cannot hook up dual monitors (unless you add a PCI card).

The breakout box (BoB) that hooks into the back of the Edition Pro 5/

Radeon 8500 card with a long, stiff cable has a FireWire port and a full complement of analog inputs and outputs (including S-video) so you can connect your television for real-time previews. This is critical for all but the most casual of editing. Interestingly, since the software will take advantage of just about any graphics accelerator card (from nVidia or ATI), you could get Edition 5 by itself and pair it with a different video card (although you'd lose the BoB).

Scalable

In marketing-speak, "scalable" simply means that faster computers mean faster

STRENGTHS

- Solid real time performance
- Quality printed documentation
- Great BoB

WEAKNESSES

- No dual monitor support
- Edition UI over-rides Windows

Alliances have been broken (Pinnacle/Adobe) and re-created (Pinnacle/ATI) in a new marriage of hardware and software: Liquid Edition Pro. For prosumers and small shops, Liquid Edition is a real-time competitor in the sub-\$1,000 class of editing software. Combined and configured in a customized turnkey from DVS Direct, this no-render (no kidding) editing package was an impressive and pleasant surprise.

The Hardware

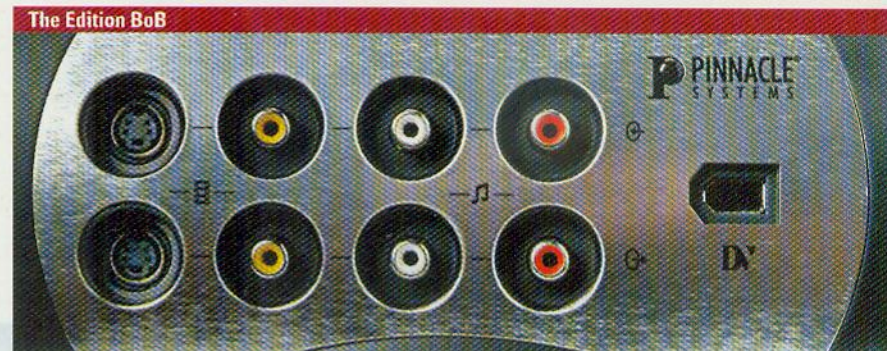
DVS Direct did not cut any corners: the fast 3GHz CPU, the 400-watt power sup-

► TEST BENCH

REVIEWED DVS Direct Pinnacle Liquid Edition Pro Turnkey Editing System

rendering speeds. Any new computer will produce real-time output (at least a preview anyhow) for most editing tasks. Only complex special effects and composites need rendering. If your shop regularly performs some type of effects and compositing beyond titles and crossfades, then real-time hardware can be a real time saver. Further, Pinnacle Edition's background rendering changes the overall workflow of editing as well: you always get real-time previews, but a fully rendered DV output is ready when you are as well.

The rendering workflow is really worth it, but do you really want to learn a whole new editing app? Although we are sure someone will tell you Edition is easy to learn, it isn't. Then again, neither is Premiere, *et al.* So if you are already proficient



in Premiere (or Vegas or Avid or FCP or MSP), the decision to switch is a tough one.

If you are looking for your first professional app, then by all means, consider Edition. If you will need to collaborate with others, you'll need to find out what they use. You might find that the broadcast pro-

fessionals you need to work with are using Pinnacle broadcast products, in which case Edition is well worth learning.

The 5th Edition

Everything that we said about the basic interface in our November 2002 review of Edition still applies—it is non-standard and takes over Windows, but the design is actually quite good. We like the free-from storyboard layout, project organization bins and the nested timeline structure. The beefy printed manuals total almost 900 pages and are well organized, clearly written and very graphical. We also appreciate the small touches, like the glossy Quick Reference card, totally customizable buttons and extensive context menus.

Effects and DVD Authoring

Edition comes with a very large array of stock effects. The Dynamic Time Warping and Color Correction tools are well done, but are

certainly not unique to this product. The app was always fast and responsive, even when we abused it by throwing clip upon clip on top of effects. Audio on imported DV AVI files took a while to process, over six seconds per minute of source media.

We are unable to cover DVD authoring in any detail here, except to say that it starts with your editing timeline. The templates are attractive enough and have a professional feel. There are very few advanced authoring features (e.g. Dolby encoding), but you can get a full-motion DVD menu with basic navigation without too much effort.

Nicely Configured

Liquid Edition Pro has a lot going for it. You never have to save your work and will soon forget about rendering. Edition is fast, responsive, customizable and loaded with effects. The full, no-render ATI AGP card package with the BoB is fabulous, especially if you need analog capture. If you are not comfortable installing hardware or aren't sure if your current computer even has an AGP slot, then a DVS Direct turnkey is a great way to go. A big bonus is the personal attention you'll get. Operations like DVS Direct offer personalized service that you just won't get from larger companies. ■

SUMMARY

Liquid Edition Pro is a professional real-time hardware editor in an affordable and reliable turnkey from DVS Direct.

D. Eric Franks is **Videomaker's** Technical Editor.

Reader Ratings

Tell us what you think. Rate this article online at www.videomaker.com/readerratings **Article #9597**

TECH SPECS

DVS Direct Turnkey

Platform	PC
OS	Windows XP Pro
CPU	Pentium 4 3.06GHz
Motherboard Chipset	Intel 845GE
RAM	1GB (2 x 512MB DDR400)
Hard Drive	80GB System (7,200 rpm, ATA133) 120GB Video (7,200 rpm, ATA133)
Sound Card	integrated AC97
Display Card	Pinnacle/ATI
Disc Writer	Sony DRU-500A
Additional Hardware	FireWire, 10/100 Ethernet, Edition Pro BoB, Keyboard and mouse (optical)
Editing Software	Pinnacle Edition 5
Additional Software	Pinnacle Hollywood FX, TitleDeko RT, Veritas RecordNow DX, Cyberlink PowerDVD, Alpha Magic Gradients
Inputs	analog (composite, S-video and RCA audio) and digital (FireWire)
Outputs	analog (composite, S-video and RCA audio) and digital (FireWire)
MPEG-2 Render Speed	22fps

Pinnacle Liquid Edition Pro

Version	5.5 (Edition 5.10 build 1749)
Platform	PC
Operating System	Windows 2000/XP
Processor	1.8GHz
RAM	256MB
Additional Requirements	AGP slot, DVD-ROM drive
Printed Manual	900 pages
Demo Version	none
Upgrade (software only)	\$400

► TEST BENCH

Sony DCR-TRV22 Mini DV Camcorder

by Charles Fulton

One to Grow With

\$700

Sony Electronics, Inc.

1 Sony Dr.

Park Ridge, NJ 07656

(887) 865-SONY

> www.sonystyle.com



If you're on a budget, but in need of a Mini DV camcorder, Sony offers the DCR-TRV22, a solid unit that could be a good fit for beginning or intermediate users. A reasonably thorough slate of manual controls makes the unit a safe choice that can grow with you.

Ergonomics

The unit is compact and comfortable to hold. The design is ergonomically sound with a number of well-placed curves to help guide your fingers to where they should be. The unit hit our right hand where the thumb meets the palm. Only a small stretch of the palm is in continuous contact with the camcorder's body. Our fingers curved comfortably to the main

controls, where the thumb actuated the start/stop button and the main switch, and the index finger operated the zoom control and still shot button.

Touch the Screen

The left hand is the gateway to the camcorder's menu system, via the unit's Touch Screen. No stylus is necessary and we didn't miss one: our fingers worked just fine. You should keep soft cloth in your gadget bag to clean the screen, because it will need it. The left-handed orientation of the menus will feel at home to a southpaw, but it will be a bit more challenging for a righty. We like the Touch Screen concept, since it made menu

STRENGTHS

- Sleek, compact design
- Simple to use
- Interval recording

WEAKNESSES

- Tape loads from bottom
- Low tested resolution

navigation so intuitive. As a bonus, the camera body has only seven buttons, which should eliminate the technophobia some beginners feel when they hold their first camcorder.

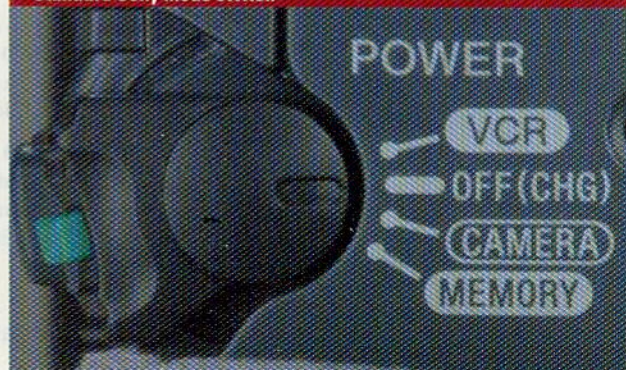
In Control

The lack of buttons can be both a blessing and a curse, however. For example, when focusing the camcorder manually, you must use the Touch Screen. A focus wheel or a focus ring would be more effective. We found the unit's autofocus to work quite well, responding quietly, quickly and accurately to changes in scenery. We tended to over-adjust a bit when pressing on the Touch Screen to focus. Repeatedly tapping the screen got us where we wanted to be reasonably quickly.

PERFORMANCE

Horizontal Resolution: 410 lines
Field of View: 40 degrees

Standard Sony mode switch



We like the Spot Focus feature on other Sonys we've seen, so we were a bit surprised that this particular camera didn't respond more surely than it did. We're sure it is the same technology and can't speculate why it was sluggish with this model. We found that the autofocus was effective, however, and we imagine that is how this camera will be used most often.

What was really cool was the interval recording for still images.

The unit includes a full compliment of input and output jacks. There are microphone and headphone jacks for shooting, as well as S-video and composite video (along with stereo analog audio) inputs and outputs to use in post-production.

Like many other Mini DV camcorders, the composite video and stereo analog audio are connected with a special 1/8" tip-ring-ring-sleeve connection (included).

The digital zoom worked quite well through the menu's 20x setting, but beyond that degradation was evident. Unlike many other camcorders, the TRV22 doesn't show the actual zoom ratio on the display.

The TRV22's electronic image stabilization (EIS) was effective. Like other EIS features we've seen, using it with extreme zooms does cause the image to oscillate slightly.

Special Modes

The TRV22's 16x9 mode simply adds black bars to the top and bottom of the image and doesn't stretch the display to yield a true anamorphic 16x9 frame. There is an option in the display called Frame Rec, for recording short bursts of video to create stop-motion animation. The Frame Rec feature could be fun for an aspiring animator on a budget.

Another creative feature is interval recording. You can record in bursts (in 1/2-second intervals from 1/2 second to two seconds) for lengths from 30 seconds to 10 minutes.

Still Shot

The still image feature is simple and convenient, if only low resolution (640x480). What was really cool was the interval recording for still images. This lets you snap a picture automatically once every one, five or ten minutes. Put the camera on a tri-



pod, plug it into the wall and you can get some fabulous time-lapse shots of flowers opening, bread becoming moldy or whatever suits your fancy.

On the Bench

While shooting in the field, the image quality of this camera was quite nice. On the test bench, we did not see particularly high numbers, and observed a small amount of color fringing on our resolution chart.

Comparing apples to apples, the images produced by this camera were decent, but not spectacular. Overall, we were satisfied with the unit's abilities. The DCR-TRV22 is a fine point-and-shoot camcorder for hobby, home and vacation shooting.

SUMMARY

A friendly and affordable point-and-shoot cam with the Sony name.

Charles Fulton is an Associate Editor for *Videomaker* Magazine.

Reader Ratings

Tell us what you think. Rate this article online at www.videomaker.com/readerratings Article #9785

TECH SPECS

Format	Mini DV
Lens	f1=3.3mm to 33mm, F/1.7, 10:1 optical zoom, 30mm filter diameter
Image sensor	1/4-inch CCD
Gross pixels	680,000
Effective pixels	340,000
Viewfinder	color
LCD viewscreen	2.5-inch color (123k pixels)
Focus	auto, manual, spot
Image Stabilization	electronic
Maximum Shutter Speed	auto only
Exposure	auto, manual
White Balance	auto, manual, presets
Audio	12-bit (default), 16-bit
Microphone Input	1/8-inch stereo mini
Headphone Output	1/8-inch stereo mini
Inputs	FireWire, S-video, composite
Outputs	FireWire, S-video, composite
Edit Interface	FireWire, LANC
Other features	Night Shot, still shot
Dimensions (w x h x d)	(640 x 480), 8MB Memory Stick
Weight (sans tape and battery)	71 x 90 x 112 mm (2 7/8 x 3 5/8 x 4 1/2 inch)
	1 lb. 2 oz. (530g)

▶ TEST BENCH

Bella DV Keyboard with Jog/Shuttle Controller

by D. Eric Franks

DVboard

\$110

Bella Corporation
215 N. Victory Blvd.
Burbank, CA 91502
(818) 563-9500

> www.bella-usa.com



A lot of cool products come through our front doors. Some are complex and some are expensive. Bella Corporation's new DV Keyboard is neither. In essence, the DV Keyboard is a full-featured, programmable keyboard with a jog/shuttle dial for video editing. Even more, the keyboard comes with a sticker set to get you using shortcut keys. If you spend more than a couple of hours a month editing video and you aren't using keyboard shortcuts beyond the spacebar, you need to start learning.

Basics

The keyboard itself is decent enough (and is being used right now to type this review). It is a full-sized 'board with a number pad and a full range of 17 or so programmable hotkeys for multimedia playback and Web browsing. Programming the various keys is easy. If, for

example, you currently use the Backspace key to go back on a Web site and use F5 to Refresh, you might program those keys on this keyboard to Undo and Redo. Or to any combination of keys (e.g. CTRL+S for Save) or to a function key (e.g. ALT). This is all pretty standard for a programmable keyboard. The keyboard also has two USB 1.1 ports.

Bella has replicated the very intuitive feel of a VTR's jog/shuttle dial on the DV keyboard.

Jog/Shuttle

The innovative part of this keyboard is the Jog/Shuttle dial which sits where the arrow keys normally reside. In old-school video production, tape-based editing machines (otherwise known as VTRs) were controlled with a jog/shuttle device for precise control. The jog dial was in

the middle of the device and allowed the editor to move frame by frame through a tape. The shuttle wheel on the outside set the tape rewinding or forwarding at various speeds,

STRENGTHS

- Space-efficient jog/shuttle
- Flexible programmability

WEAKNESSES

- Jog indentation slightly shallow
- Software uninstaller not in Control Panel

depending on how far it was turned. The jog/shuttle input device on a VTR has a very intuitive feel. Bella has replicated this feel very well on the DV Keyboard.

In Action

The first video editing app we tried was Vegas. Not surprisingly, the jog/shuttle was extremely responsive and quickly became second nature. We then ran the new Premiere Pro and found that the keyboard was equally at home with that app. Unfortunately, it was not as responsive with early versions of Premiere, specifically 6.5, where the shuttle dial lagged a fraction of a second behind. Of course this indicates a software problem and not a problem with the DV Keyboard. Even with the fractional lag, the jog/shuttle dial demonstrated its usefulness quite clearly. MediaStudio Pro 7 was likewise enhanced with the DV Key-

TECH SPECS

Model	DV Keyboard
Platform	PC and Mac
Operating System	Windows 98SE/2000/XP Mac OS 9.2, 10.1.5, 10.2
Connection	USB 1.1
Extras	two USB 1.1 ports, Pinnacle Studio and Sonic Foundry VideoFactory sticker sets

board and the 6.5 version was fine as well. Our only criticism of the jog dial was that it was a little too smooth and the indentation on it was a little too shallow for our liking.

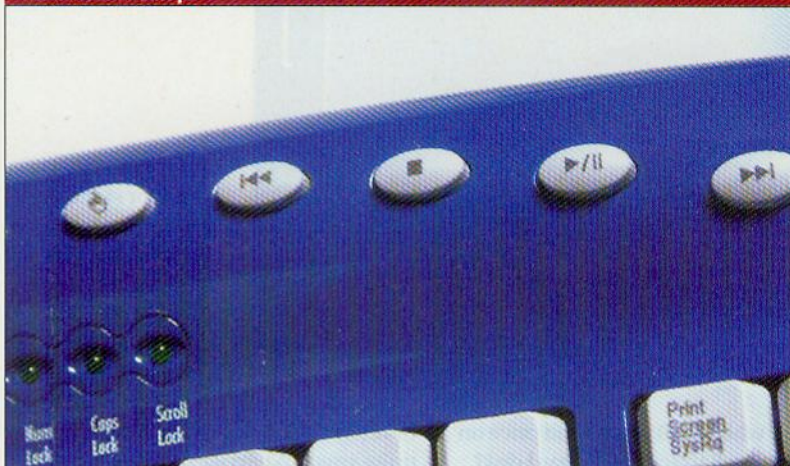
We also tried the keyboard with Microsoft Word. In Word, the shuttle dial acts just like a mouse scroll wheel and the jog dial moves the cursor left

The DV Keyboard is reasonably priced and it will undoubtedly last longer than your current computer.

and right. There are also two programmable hotkeys that we set to Copy (CTRL+C) and Paste (CTRL+V). The software that drives the keyboard senses when various applications are run and switched to, so we could program one set of buttons for WinWord and another for Outlook. This keyboard



Multimedia hotkeys



has certainly increased our productivity. We did run into a problem when uninstalling the keyboard, however: the software was not listed in the Add/Remove Programs dialog. There is an uninstall app that automatically removed the software, but we had to manually hunt it down in the <C:\Program Files\DV Keyboard\> directory.

Shortcuts

Eclipsed by the flashy jog/shuttle dial and programmable keys are the shortcut stickers. We are huge fans of shortcut keys. Anyone who edits more that casually should spend some time learning the shortcut keys. The hard part is learning the keys.

The DV Keyboard comes with stickers that you can press on the keys to help you learn, and ultimately use, the dozens of shortcut keys found in modern editing software. Pinnacle Studio and Sonic Foundry (Sony) VideoFactory stickers are included (the later are a subset for Vegas as well), but you can purchase additional sets for \$14.95. The stickers are high-quality vinyl and are custom designed for these keyboards. (A quick jaunt around our office revealed that the sticker sets will work

on many other keyboards. We're not guaranteeing they will fit your keyboard and Bella explicitly warns against doing so, so *caveat emptor*.)

Transformational Editing

The DV Keyboard is a very reasonably priced addition to any editing suite, and it will undoubtedly last longer than your current computer. You might also consider their color-coded Professional Series keyboards, especially if you are in a teaching environment. These 'boards are functionally equivalent, but generic white keys are a dime-a-dozen (or less) and the special colored keys add \$60 to the price.

If you spend hours each week at your edit bay, Bella Corporation's new DV Keyboard will transform your editing in very tangible and pragmatic ways. ■

SUMMARY

The DV Keyboard will raise your awareness of keyboard shortcuts and increase your productivity.

D. Eric Franks is *Videomaker's* Technical Editor.

Reader Ratings

Tell us what you think. Rate this article online at www.videomaker.com/readerratings **Article #9813**

▶ TEST BENCH

Maxtor OneTouch External Hard Drive

by D. Eric Franks

Portable Versatility



Remember when \$600 was a good price on a 13GB Seagate Barracuda A/V hard disk? Analog MJPEG capture rates needed 10,000 rpm drives that sounded like Everglades fan boats and were hot enough that the kids could use your PC as an Easy Bake oven when you captured video. Well, those days are long gone. In-camera digital compression has lowered the data rate necessary for acquisition, drive technology has improved and drive sizes have increased 20 fold. Best of all, the price-per-gig is a fraction of what it once was, with some video-capable drives falling well below \$1/GB after rebates. Maxtor's latest OneTouch external drive offers an incremental improvement over the previous version, but the price/performance/features are remarkable as a whole.

Format

The 250GB OneTouch drive we reviewed was housed in an attractive brushed alu-

minum case that can lay flat or stand vertically on the included plastic stand. The front panel sports a pair of bright blue LEDs under the OneTouch button that you may find either annoying

or really cool. The AC/DC transformer is quite small. When we powered up the drive (using the power switch), we were quite astonished with how quiet it was. There were no fans and we could scarcely hear the crackle of the heads madly transferring data to the platters without pressing our ear to the drive housing.

After the connecting the drive to the USB 2.0 port, we checked out the drive and found that it was formatted using the FAT32 file system. We understand that Maxtor used the FAT32 because it is more universal, but it is not the best for video on a PC, since this older file system forces videographers to split their video files into separate chunks. Fortunately, it was a simple matter to reformat the drive to the NTFS file system. In WinXP, a Quick Format did the trick and only took a few seconds.

Capture

We began our tests capturing to the drive using the USB 2.0 connection, with our camcorder going into the FireWire port on a Creative Labs Audigy sound card. The specs for USB 2.0 clearly show that the standard has the bandwidth to flawlessly capture 25Mbps DV video, by more than a magnitude. Initial tests were flawless and we captured three consecutive hours of video with breaks only to change the tapes. The

\$350

Maxtor Corporation
500 McCarthy Blvd.
Milpitas, CA 95035
(408) 894-5000

> www.maxtor.com

STRENGTHS

- Capacity/price
- Flexible connectivity
- Instant installation

WEAKNESSES

- Default FAT32 format

aluminum housing became very hot to the touch, which made us glad that the drive was not cooped up in our already stuffy and warm computer case.

Our next test was to unplug the drive from the USB port and connect the FireWire for testing. We tried to do this hot, meaning that we did not power down the computer. When the FireWire was plugged in, Windows detected the drive after about ten seconds and then ran the New Hardware Installation Wizard. After installing the drivers, we were prompted to reboot the computer, which we did.

Since our first test machine only had a single FireWire port, we chained our camcorder to the back of the hard disk. FireWire laptop owners will especially appreciate that the results of these tests were also flawless, with no dropped frames. We did get a minor error message from Windows at one point while the drive was connected to the FireWire port, but we were not actually using the drive at the time, so we aren't sure what it meant.

Mac, USB 1.1 and USB 2.0

We hot-swapped the drive back to a USB 1.1 port and were pleased to see a warning pop up, cautioning that this type of USB connection was not fast enough for the drive, even though the drive still worked. Again, we hot-swapped the drive back to a USB 2.0 port and tried to capture again. This time, we experienced lots of dropped frames. A reboot immediately solved this problem. Our haphazard, hot and frequent swaps were certainly to blame for the dropped frames and in

TECH SPECS

Platform	PC or Mac
Operating System	Win 98SE/2000/Me/XP; Mac OS 9.1 or later
Processor	PII or Mac G3
RAM	32MB
Interface	USB 2.0 (and 1.1) and FireWire
Drive Specs	
Cache Buffer	8MB
Capacity	250GB
Speed	7,200 rpm

► TEST BENCH

REVIEWED Maxtor OneTouch External Hard Drive



more than 20 hours of hard use, the drive did not drop any other frames at all.

We also tested the drive on a Mac G4 through the FireWire port. No additional software drivers were required. Our capture tests were just as reliable on the Mac as they were on our

Wintel box. G4 Macs do not have USB 2.0 ports, although

new PowerBook G4s do (in addition to two FireWire ports), as do the G5s.

Fast Enough

One of the main marketing pushes for this drive is the OneTouch button, which is intended to automatically run the included backup software (but could be programmed to run Solitaire or any other program you want). We cursorily tested this feature and it worked as advertised.

External drives from Maxtor cost about 25% more than the equivalent internal version, which is about what you'd pay for an external enclosure kit to convert an internal drive. External drives tend to have slower peak burst transfer rates, which means that the drives are slower overall. For video capture, however, burst transfer is meaningless, and the OneTouch drive is more than capable of handling the task, by a factor of 20. Besides the ease with which you can transfer huge amounts of data between computers, bringing this 7,200 rpm heat-generator outside of the computer case is a good idea. Convenient, portable, silent and attractive; this is a no-hassle drive with massive capacity. ■

SUMMARY

A no-hassle drive with massive capacity.

D. Eric Franks is Videomaker's Technical Editor.

Reader Ratings

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The Need for Speed

While Web video offered many new opportunities, the fact of the matter was that the Internet wasn't quite ready to live up to the promise. Understanding this problem requires a look back at the way things were, compared to where they are today.

In the early-90s, when the Internet began its invasion of everyday life, nearly everyone connected to the 'Net via dial-up modem connections. Most modem speeds back then weren't what they are today. Nowadays, many dial-up users connect to the Internet using a 56kbps modem, the fastest connection speed for a standard dial-up modem. Unfortunately, many phone companies use their wires in such a way that 26kbps is the fastest anyone can connect, however. Back in the old days, many modems were only able to connect at half of that rate.

The sluggish transfers of dial-up resulted in a video experience that brought new meaning to the term "stop-action" or played highly-compressed, highly-distorted video smoothly at resolutions the size of a postage stamp. Beating the problems of delivering Web video required the use of greater bandwidth. Greater bandwidth allows more data to be sent at a time.

When data-transfer speeds vary greatly, data bottlenecks occur. For example, a typical dial-up modem connection, nowadays, only connects at

around five to twelve kilobits per second. Yet, modern network cabling can handle transfers of data up into the gigabit (millions of bits per second) range. So the first part of the solution was to increase the rates at which systems send and receive data from the Internet.

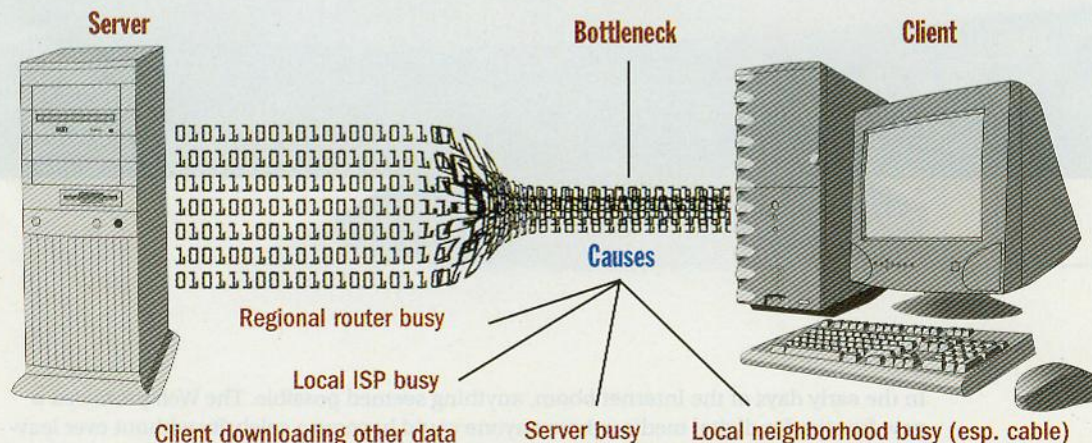
Bottlenecks are particularly a problem for Web-based video, since video playback quality is time dependent. Most networks use shared connectivity, meaning that network users compete for available bandwidth: the more users on the network at a time, the lower the bandwidth.

High network traffic distorts unbuffered video playback, since data must wait to pass through the cabling intermittently.

Beating the System

Enter broadband Internet connections. While broadband refers to many types of connections, the most common at the consumer level are digital cable modems and Digital Subscriber Line (DSL) connections. For about twice the price of a dial-up connection, users can access the Internet from 50 to 100 times faster with a broadband connection. At these speeds, Web users finally watch and deliver digital video the way it was intended to be seen: full-screen, smooth-moving and visually sharp video delivered without the painful wait times experienced during a dial-up session.

Causes of Broadband Bottlenecks



You may have a fast connection, but there are many possible bandwidth sappers that can cause bottlenecks.

Broadband is critical for successful Web video, because it finally offers the increased bandwidths necessary to handle the amounts of data that quality digital video requires.

How Fast is Fast?

As mentioned, typical broadband speeds range from 50 to 100 times faster than dial-up connections. But what does that really mean? To put this into perspective, downloading a 1MB file might take anywhere from three to five minutes with a good dial-up connection. Using a broadband connection, the same file will usually download in just four to ten seconds.

The benefits of broadband don't stop at faster downloads. For digital video, this also translates into less video compression needed and larger screen resolutions – delivering vastly superior video images to Web users. The megabits-per-second speeds of broadband allow videographers to produce full-screen videos that are easy to download or stream to Web audiences.

Streaming video refers to video content that you can play on your computer without actually downloading the entire file to the system's hard drive. There are benefits and drawbacks to working with streaming video. One benefit is that video playback begins immediately (once the buffer is full). The rest of the file continues to stream to the system in the background, while the received data plays back. Another benefit is that you can skip to the middle or the end of the video, without downloading everything that came before that point.

The main drawback of streaming video is that users must be online to view it. Since nothing is permanently downloaded to the hard drive, users can't simply click the media file to re-watch the video. For copyrighted material, however, streaming video offers a bit of protection for this very reason.

One of the most common misconceptions about Internet performance (thanks to marketing initiatives primarily from Intel) is that faster computer systems equal faster connections. The fact is that a computer's modem or Network Interface Card (NIC) almost completely determines connectivity performance. This is easily demonstrated using a cutting-edge system (say, 3GHz processor and 512MB of RAM) that's set up with a dial-up connection.

The Broadband Bandwagon

One of the main reasons high-quality digital video is now a reality is that many of the cable companies

Typical broadband speeds range from 50 to 100 times faster than dial-up connections.

Batch Processing

Some compression tools, such as ProCoder, cleaner XL and Final Cut Pro 4, allow you to batch process your video files. This means that you can encode multiple files to your chosen format automatically or encode multiple files to multiple formats automatically. Once the specifications are set, the software does the rest of the work converting the files without requiring any further attention from you.

Video Hosting

Many sites offer video hosting services and some support streaming. Be sure to read all of the submission guidelines carefully, since some sites may require a fee for their services. Some great places to start looking are:

- ifilm.net
- atomfilms.com
- cinemano.com
- microcinema.com



Apple
Final Cut Pro 4
\$999



Canopus
ProCoder 2.0
\$499

Discreet
Cleaner XL
\$599



have heavily invested in their cable infrastructures to provide cable modem services, increasing the availability of broadband. Another reason is that more people are demanding the kind of media-rich Web browsing experience that broadband makes possible. As a result, more people are making the leap into the broadband arena.

As of mid-2003, the total number of worldwide cable modem subscribers reached 27 million. This

The benefits of broadband don't stop at faster downloads.

number is expected to reach 34 million by year's end, and as many as 68 million by 2007.

With over 14.6 million cable modem sub-

scribers, North America leads the broadband market, followed by 6.6 million in the Asia-Pacific region and

3.7 million in Europe. Regarding total market share, cable modem accounts for 67 percent of the broadband market, with DSL accounting for 28 percent.

Up to Speed

To start delivering high-quality digital video to the masses via the Web and to optimize the experience for a broadband audience, you'll need to do a little preparatory work. These considerations are made after the final edit, when you must determine what file types, compression, frame rate and other settings you'll use to process your video.

Selecting a file type (format) is fairly straightforward: use a cross-platform file format platform (e.g. Windows, Linux and Macintosh compatible) to assure the widest possible audience. Some choices include Windows Media, QuickTime and Real.

Compression is one of the most important considerations, since this determines the final file size, image quality and color depth you'll be limited to when processing video. Fully uncompressed video files are enormous (about 27MB of data per second for NTSC). Source file sizes vary depending on what kinds of format the camcorder shot and the computer captured. Some of the better codecs that deliver high compression and superior image quality use the MPEG-4 standard, such as the DivX codecs. MPEG-4 plays back cross-platform, as well as on satellite television and wireless devices.

Making the Switch

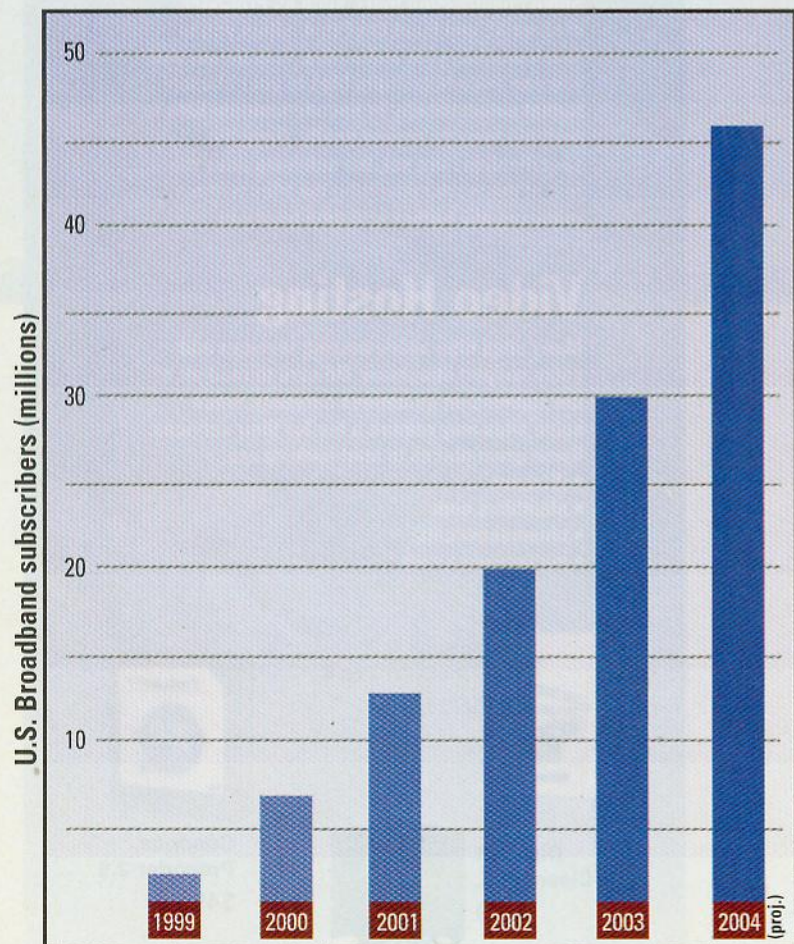
Many Web users wonder why they should make the switch to broadband. After all, dial-up has worked so far and it's less expensive. So, why bother? The fact is that broadband potentially offers what dial-up will never be able to deliver. It's beneficial to many different markets, such as advertising, entertainment, video conferencing and distance learning services.

What broadband offers to Web users is not unlike what cable television offered viewers during the age of antenna-only television. And with millions more subscribing, the opportunities will only become greater with time. It's simply the best way to get the most out of digital video on the Web, both as a viewer and a content creator. ■

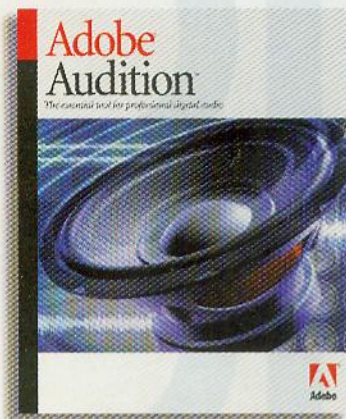
Pat Bailey is a digital video Technical Support Analyst and freelance writer.

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The number of subscribers to broadband services of all types increases dramatically every year.



Adobe Audition
\$299

SmartSound Sonicfire Pro 3.1
\$299



Music Creation Software Manufacturer Listing

This is a sampling of companies that produce music creation software. It is not a complete listing.

Adobe
www.adobe.com

Apple
www.apple.com

Arturia
www.arturia.com

Bitheadz
www.bitheadz.com

Cakewalk
www.cakewalk.com

FL Studio
www.flstudio.com

Magix
www.magix.com

PG Music
www.pgmusic.com

SmartSound
www.smartsound.com

Sony Pictures Digital Networks
mediasoftware.sonypictures.com

Steinberg
www.steinberg.com

U&I Software
www.uisoftware.com

Voyetra
www.voyetra.com

Compiled by Charles Fulton

There are four different routes to legitimate tracks:

- Obtain rights to individual pieces.
- Buy royalty-free pieces or packages.
- Mold musical phrases to your exact needs.
- Build songs from audio loops.

Of course there is a fifth route: compose and perform an original composition, but we're not going to cover that complex topic here.

At different times, we've discussed each of these options (see the accompanying sidebar for listings), so let's stand them all side-by-side to compare the pros and cons. We're going to find that each type of music making has much to recommend it, in the right situation, of course.

Rent-a-Track

First off, you can rent the rights to countless thousands of songs, from hip-hop to Gregorian chants. To do so, hit the Web sites of ASCAP, BMI or SESAC and follow the instructions. You'll end up with the right to use your rented piece in a specific program that's intended for a specified purpose.

This route has several benefits. You can match the musical flavor to the program exactly, because you have so many thousands of pieces to choose from. You can enhance your show with the world's finest compositions, performed by the most talented artists and mixed by the best engineers. You can increase audience identification as viewers recognize famous tracks.

Now the down side. First, the rights to some pieces are unobtainable, at least by small-scale entrepreneurs, and the costs of others may be prohibitive. You want the Lohengrin Wedding March recorded in 1953 by the Lower Slobbovian Radio Orchestra? No problem! Paul Simon's *Graceland*? That's different.

Second, you're pretty much stuck with the length you get. You can fade pieces in and out and sometimes adjust length by cutting or by carefully doubling musical elements, but that's about it.

Nevertheless, there are times when only one piece of music will do. My niece just got married to a Wynton Marsalis performance of the Trumpet Voluntary by Jeremiah Clarke. When I edit her wedding video, you better believe I'll go after the rights to that track!

Royalty-Free Music

Royalty-free music composed specifically for videos is often far more practical. To get it, you purchase a



Manhattan Production Music

Apple Trax
Various Prices

package of tracks — anywhere from a single CD to a huge music library — for a one-time fee that

gives you the rights to unlimited uses of all the tracks, within the scope defined by your license. For one-time use, you can often pay for and download individual tracks.

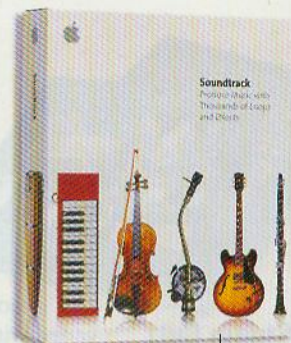
Royalty-free music has many advantages. For one thing, it is tailored for specific genres of programs, such as commercials, weddings, corporate videos and training aids. Each track is titled to explain its use, which can result in some pretty funny names like “Corporate Tadaaa!” and “Bright Digital Future.”

Most discs have pieces in different lengths, ranging from five-second “stings” and wrap-ups, to three- or four-minute compositions for underscoring. The more complete libraries contain each

length in multiple orchestrations (e.g. “with piano solo” or “light orchestral”). Some also supply alternate styles, such as New Age, Bluegrass or Soft Rock.

If you buy a large package, you can frequently get a database of every single cut, searchable by all sorts of key words. But such packages are usually for production departments or houses that may need dozens or even hundreds of tracks for their many programs.

Perhaps the most attractive features of buyout music are cost and ease of use. Though prices vary among the many stock music houses, individual cuts are usually inexpensive to rent. If you regularly produce one type of program — weddings, say, or training videos — a royalty-free package of tracks is often a true bargain. When you need a cut, simply choose the emotional effect, the length, the orchestration or perhaps the musical genre and lay it in. ➔



Apple Soundtrack
\$299

CD Music and Sound Effect Libraries Manufacturers Listing

This is a sampling of companies that produce music and/or sound effect libraries. This is not a complete listing.

615 Music Library
www.615musiclibrary.com

Accent Music Productions
www.accentmusiccds.com

AirCraft Production Music Library
www.mediacraftmusic.com

Associated Production Music
www.apmmusic.com

British Audio Designs
www.britishaudio.com

The Canary Collection
www.canarymusic.com

Catovah Arts
www.catovah.com

ClipJingles
www.clipjingles.com

Crank City Music
www.crankcity.com

CSS/DAWN Music
www.cssmusic.com

Davenport Music Library
www.davenportmusic.com

DeWolfe Music
www.dewolfemusic.com

Flying Hands Music
www.flyinghands.com

Freeplay Music
www.freeplaymusic.com

Fresh Music Library
www.freshmusic.com

Gene Michael Productions
www.gmpmusic.com

Geoffrey Wilson Buyout Music
www.gwilsonbuyoutmusic.com

Ghostwriters Radio Mall
www.radio-mall.com

Instant Access Music
www.iamusic.com

Killer Tracks
www.killertracks.com

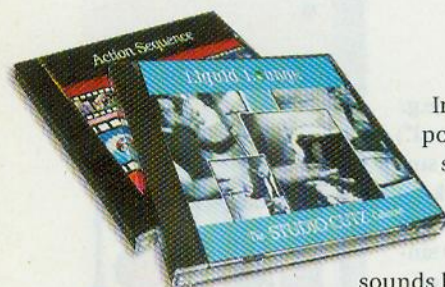
Lazertrax Production Music
www.lazertrax.com

LicenseMusic.com
www.licensemusic.com

Manchester Music Library
www.manchestermusic.com

Manhattan Production Music
www.mpmmusic.com

Continued on Page 44



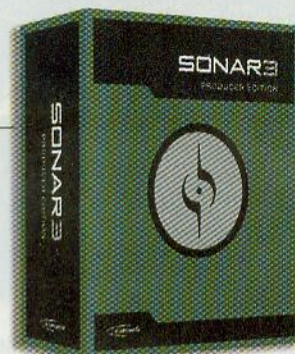
Studio Cutz
Typical Track:
\$30/minute

In the minus department, the compositions are still not exactly the same duration as your project, forcing editing compromises and improvisations. Finally, most (though not all) library music sounds like what it is: canned and pervaded with a faint aroma of elevators. It's great for underscoring and other unobtrusive program support functions, but you won't want to let it call attention to itself.

Roll-Your-Own

SmartSound markets several products that let you create perfectly-timed compositions in a variety of musical arrangements. In its simplest form, the procedure involves selecting a track, choosing a style from a list, and entering the required length. With that done, a mouse click generates a version customized to your program.

Cakewalk
Sonar 3
Producer Edition
\$719



It's a real composition too, not just a hunk of underscoring. That's because each composition is supplied with a beginning, middle and end. The sneaky part is in the middle section, which can be cut anywhere at one-second intervals and seamlessly joined to the engine and caboose. The pieces are so cleverly composed that they sound perfect, regardless of length. The music is about the same quality as buy-out music and some SmartSound tracks are actually derived from the Music Bakery's buyout library.

Admittedly, video sections don't usually end in even seconds (with a time code address like 00:03:21:00). However, if you want to time music to the frame, simply use rolling edits to adjust some shots by a few undetectable frames each until you

CD Music and Sound Effect Libraries Manufacturers Listing (Cont.)

Media-Tracks
www.media-tracks.com

Megatrax
www.megatrax.com

Mokal Music
www.mokalmusic.com

Music 2 Hues
www.music2hues.com

The Music Bakery
www.musicbakery.com

Narrator Tracks
www.narratortracks.com

Network Music
www.networkmusic.com

Nightingale Music Productions
www.nightingalemusic.com

Non-Stop Productions
www.nonstopmusic.com

OGM Production Music
www.ogmmusic.com

Omnimusic
www.omnimusic.com

Partners in Rhyme
www.partnersinrhyme.com

PowerHouse Music Library
www.powerhousemusic.com

Production Garden Music
www.productiongarden.com

Pro Background Theme Music
www.pbtdm.com

River City Sound Productions
www.rivercitysound.com

Signature Music Library
www.sigmusic.com

Sound Dogs
www.sounddogs.com

Sound Ideas
www.sound-ideas.com

Studio Cutz
www.studiocutz.com

Token Media
www.token.com

TRF Production Music Libraries
www.trfmusic.com

UniqueTracks Royalty Free Music
www.uniquetracks.com

Valentino Production Music
www.tvmusic.com

Compiled by Charles Fulton



AirCraft
The Latin Compilation
\$495

come out in sync with the music ending with the last shot.

SmartSound programs come in three flavors. Movie Maestro (\$50) includes the basic functions and allows royalty-free use in non-commercial and educational applications. You can add to the compositions supplied by buying SmartSound CDs and then selecting the styles suitable for the programs you produce.

Quicktracks (bundled with Adobe Premiere Pro) adds several useful features and grants you full commercial rights. SonicFire Pro, the flagship product (\$300-\$500), also carries full commercial rights and adds a score of features. You can preview and download SonicFire originals, work with any sound file, including MIDI and audio CD tracks and control composition and editing with great precision and finesse. The results are so good that many small production houses rely on SonicFire exclusively.

Loop the Loop

If you want to customize music even more completely, loop-based composition may be for you. The basic idea is simple: compose original music yourself by manipulating repeating segments of music (called "loops" because their analog ancestors were lengths of recording tape with head and tail spliced together to make a circle that could be replayed endlessly). ACID from Sony (purchased from Sonic Foundry) is the oldest and most popular software suite for loop-based composition, but there are several other products as well, such as Fruity Loops, Adobe Audition or Bitheadz.

Working horizontally (on a timeline), you pick a starting track, often some sort of rhythm instrument, and lay down one or more sequences of repeated loops. Then you lay down a second layer on the next track on the timeline, perhaps a bass line. You continue this process with additional layers and instruments until you've achieved the desired effect.

This sounds crude until you recall that loop-based software can access literally tens of thousands of different loops, performed by professional musicians on real instruments (as opposed to synthesized equiva-

lents). Selected, combined and enhanced with ingenuity, these components will yield music that sounds sophisticated and completely original.

The good and bad news about loop composition is the same: it involves creating actual melodies and arrangements. If you have musical talent and at least some experience, you can achieve results that are remarkably fine and personally gratifying. On the other hand, if you compose just by randomly noodling around, you may never get satisfactory results.

Talented or not, you'll spend a good chunk of time on each piece. Imagine building a 30-second, multi-layer video montage, manipulating tempo and color, adding effects and compositing 3D moving titles. Creating a sophisticated loop-based composition can be similarly time-consuming.



Valentino
Various Prices

Royalty-free is tailored for specific genres of programs, such as commercials, weddings, corporate videos and training aids.

In the Final Analysis

As we promised, each type of music has its place. If a specific piece of music is important, it may be worth renting the rights to it. If you specialize in a certain genre of video, a good library of buyout music may be the fastest way to achieve a professional sound. If you produce a variety of styles of programs, then customizable tracks from SmartSound offer great versatility and lightning speed. If you have the time and the talent, nothing is more creatively satisfying than layering up loop-based music.

Well actually, one thing is more satisfying. But if you could compose, arrange, perform and record your own original music, you wouldn't need these other solutions anyway. ■

Contributing Editor Jim Stinson is the author of the book *Video Communication and Production*.

Reader Ratings

Tell us what you think. Rate this article online at www.videomaker.com/readerratings **Article #9774**

the 4th codec

In this article, we'll take a look at one of the newest and most promising of these standards: MPEG-4. We'll examine what makes MPEG-4 so interesting and how you can expect to make use of MPEG-4 in your future video creations. By the time you're finished with the article, we hope you'll be as excited as we are about the possibilities that this technology presents to videographers, audio specialists and digital content creators of all stripes.

What It Is

All of the members of the MPEG family of standards are codecs or **C**ompression-**D**ecompression schemes. The primary task of a codec is to reduce the size of a digital media file and thus reduce the bandwidth, or data rate, necessary to play the file. If you find this confusing, don't worry; we're going to break it down a bit more.

The first issue, file size, is especially important for video storage. Uncompressed video takes a huge amount of storage space, regardless of whether you're storing it on a hard drive, DVD or digital tape. To imagine how much space is

required, consider that a typical uncompressed still frame of video, at the quality most of us are used to viewing, requires just under one

MPEG-4 really shines in the areas of efficiency, scalability and industry support.

megabyte to store. Video in the United States typically plays at 30 frames per second. This means that your typical uncompressed video might occupy 27 megabytes per second to store. Do a little more math, and you'll soon discover that the new 80 gigabyte hard drive that came with your computer will only store about 50 minutes of raw, uncom-

pressed video - and that's before you add the audio into the equation. Do one more calculation and you'll see that a DVD disc (at 4.5GB) can hold less than three minutes. Clearly, we need some form of digital compression to reduce that file size.

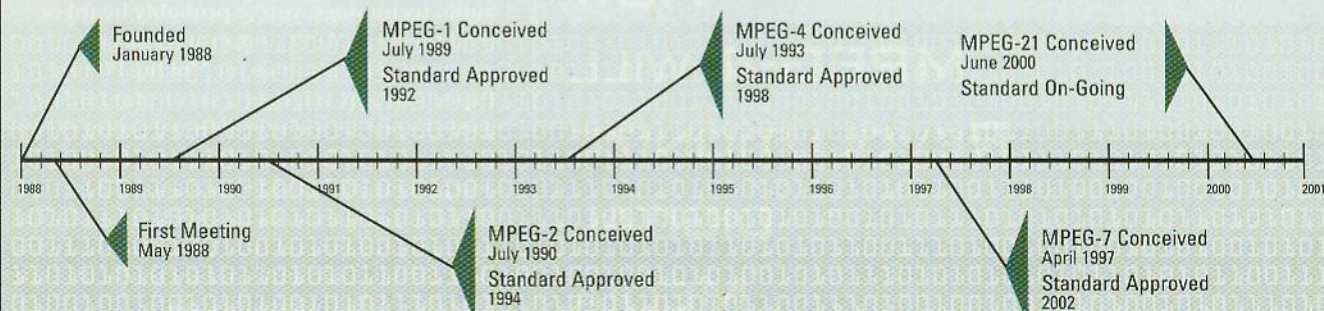
The second issue is so closely related to the first that it's really the same problem viewed from another angle. Imagine you have an uncompressed VHS-quality video file sitting on a hard drive, ready to play. In order to provide smooth playback, your hard drive would have to dump data to your computer at a sustained 27 megabytes per second (or, as an engineer would think: 216 megabits per second [27 x 8 bits/byte]). Storage systems are available that can hit these speeds, but they're very expensive. Now consider that you want to deliver that same video to the masses, via the Internet. Whatever technology you use, the speed of that technology (bandwidth) would have to match that 27 megabytes per second, without fail.

MPEG 1, 2, 3

Enter the MPEG family of codecs, which compress the file size down to a manageable level, then decompress the moving images and sound as you watch them on the fly.

MPEG-1, the first standard agreed upon by the group, is widely used for small Web video, CD-ROM video and VCDs, which were popular in Asia. It's also the most (in)famous format for compressing songs on the Internet, swapped using file-sharing services. MP3 is not MPEG-3 and actually stands for MPEG-1, Layer 3. MPEG-1 video and audio is fairly highly compressed, but the more compression you use, the worse the image appears. It's possible to achieve a compression ratio of 200:1 with MPEG-1, thus reducing the file size to about one megabyte

History of the Moving Picture Experts Group >>



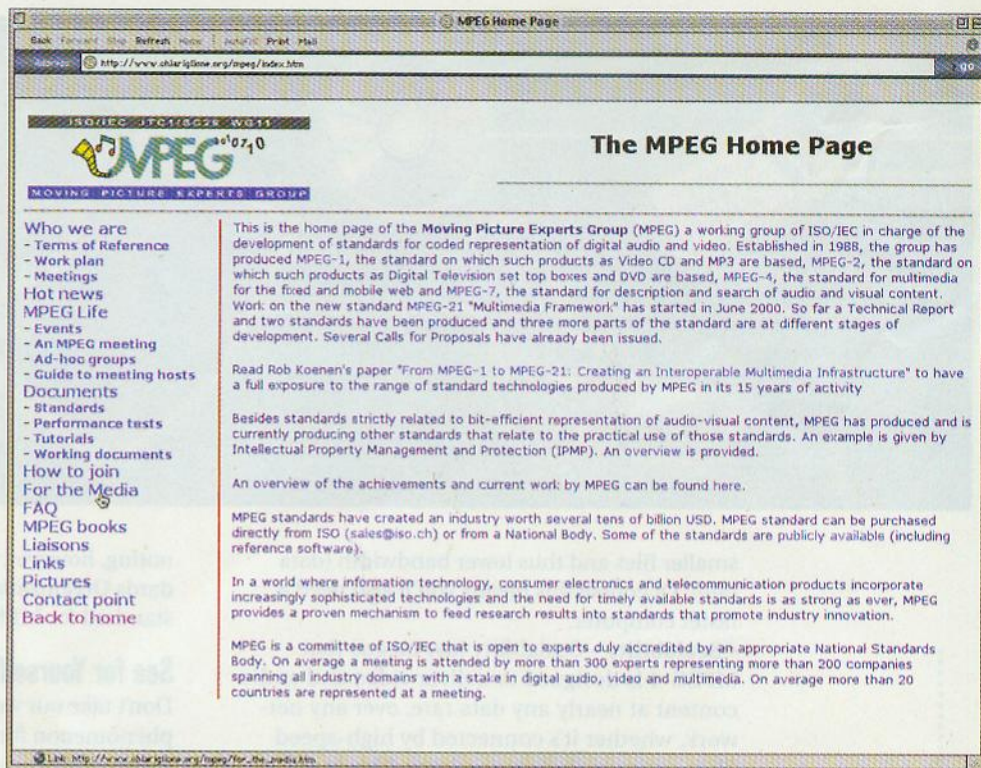
the 4th codec

per six seconds of full-sized video, but the resulting image is very difficult to watch at that point. Most MPEG videos use 50:1 or less.

MPEG-2 has gained widespread use in home DVDs and digital television broadcasts. Much more advanced and efficient than MPEG-1, MPEG-2 video achieves a very stable and watchable picture at around a 40:1 compression ratio. "More advanced" also means "more computationally intensive", therefore, MPEG-2 video requires a faster computer than MPEG-1 video.

MPEG-3 was originally developed for use in HDTV broadcasts, but the advances made under the MPEG-3 name were eventually incorporated into MPEG-2. For this reason, MPEG-3 is a dead codec, one that served its purpose and is now no longer a separate standard.

This brings us to MPEG-4. MPEG-4 takes advantage of the experience gained by the development of MPEG-1 and MPEG-2 and goes one step further by adding in elements such as 3D objects, interactive sprites, text, digital photos and other media types. In other words, you can watch a video program, press a button to bring up some text navigation buttons, scroll through options, make a selection to move to another scene or even make a purchase. "But I can do this already," you say. Sure, you can, however, when you do this now, the interactivity usually comes from the television or the DVD player or some other proprietary set-top box. With MPEG-4, the interactivity is embedded within the video itself. This means content creators will have total control over how that interactivity appears and plays out for the viewer, regardless of the device or medium used to play the MPEG-4 file.



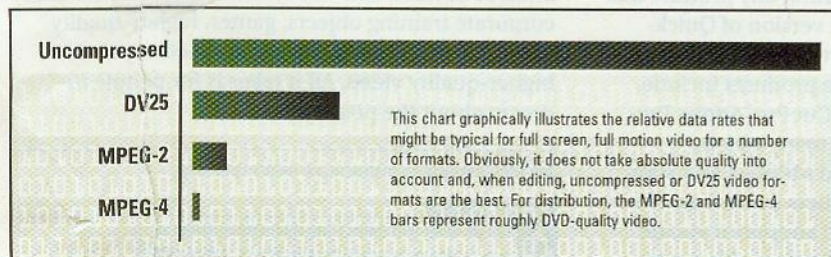
The home page of the Motion Picture Experts Group

This sounds interesting, doesn't it? It's even a little intimidating for the home videographer. But even if you never intend to bring this kind of interactivity to your videos, MPEG-4 still represents one of the most advanced codecs available for simple digital video and audio capture, storage and delivery of video content.

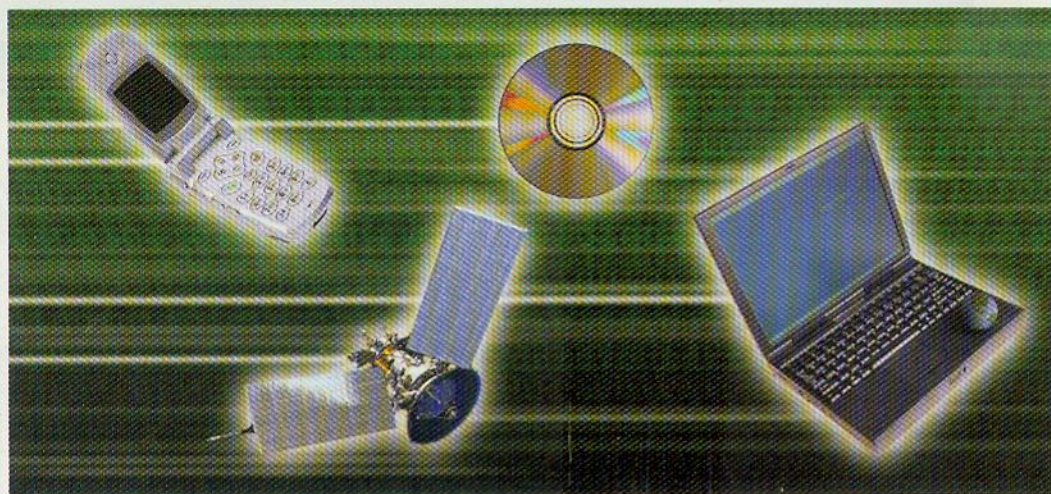
Why it Matters

MPEG-4 really shines in the areas of efficiency, scalability and industry support.

• **Efficiency** - Because it represents a refinement of earlier advances in MPEG compression and decompression technology, MPEG-4 promises to deliver higher quality video and audio at smaller data rates and file sizes. Yes, you heard that right: better video,



the 4th codec



MPEG-4 is being used in all sorts of devices, from computers to cell phones.

smaller files and thus lower bandwidth (data rate). Of course this means you'll also need a faster computer.

- **Scalability** – Scalability just means that MPEG-4 is designed to deliver video and audio content at nearly any data rate, over any network, whether it's connected by high-speed fiber optics or dial-up modems. This is an advance over MPEG-2, which is limited primarily to DVD-quality video.

- **Industry support** – MPEG-4 is currently supported by just about every major player in the media world, including Apple, Microsoft, Sun, Dolby, AOL Time-Warner, Lucent and Sony (among others). MPEG-4 content is already in use in a huge number of media and communications devices, from televisions and home video players to mobile phones and, yes, camcorders.

Within MPEG-4 lies the ability to create a whole new generation of devices and delivery systems.

So how can you make MPEG-4 work for you? Pretty simple, really. Because Apple's QuickTime technology has already fully

embraced the MPEG-4 standard, any product that currently supports the latest version of QuickTime will allow you to export your videos using MPEG-4 compression. These products include, but are not limited to, Final Cut Pro, Adobe Premiere, Discreet Cleaner and many others. Microsoft, too, has embraced MPEG-4 as a standard, and all Microsoft products (including XP's free Movie Maker 2 software) support it via the Windows Media 9 Series technology. It's worth

noting, however, that the ISO (International Standards Organization) has chosen QuickTime as the standard for MPEG-4 delivery.

See for Yourself

Don't take our word for it: investigate the MPEG-4 phenomenon for yourself. Apple's MPEG-4 pages (www.apple.com/mpeg4/) are loaded with information about how QuickTime has embraced the standard and numerous sample MPEG-4 files are available for viewing. Tech-heads will find a wealth of information at the MPEG-4 industry forum (www.mp4i1f.com). Of course, this research is only necessary if you explicitly want to watch MPEG-4 video for the sake of watching MPEG-4. The technology is so pervasive at this time that just by browsing around the Web for video, perhaps to watch the latest movie trailer, you'll eventually run into a QT or a WMV file that uses MPEG-4.

At the time of this writing, MPEG-4 is primarily used for small, easily transportable Web videos and, unfortunately, pirating Hollywood feature films. Keep your eye on this standard, however: it's mainly interesting not for how it's being used today, but for how it could potentially be used in the future. Within MPEG-4 lies the ability to create a whole new generation of devices, delivery systems, educational titles, corporate training objects, games, higher-quality music files, better disc-based interactivity and higher-quality video. All it takes is for people to dream about the possibilities. ■

Joe McCleskey is an instructional media specialist.

Reader Ratings

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REAL PEOPLE RATE YOUR VIDEOS!

BY AMANDA CUDAH

If you're like most **Videomaker** readers, you make a lot of videos, and you probably think that they are pretty good. But what does the average person on the street think of your work? We took the liberty of asking some regular people what they think of the videos that their friends make. (By regular, we mean those who don't make videos professionally but have had the pleasure of viewing hour upon hour of vacation videos, school plays and other monumental events captured on tape by their videomaking buddies.) Pay attention to what they had to say. Chances are, your friends may not have had the heart to say these things to you. ➔

**Real people
say what
your friends
wish they
could.**

REAL PEOPLE RATE YOUR VIDEOS!



Don't Shoot Me – "Filming people who don't want to be on tape. All you get is people mad at you."

Question #1: What do you feel is the biggest mistake people make in filming a home movie?

"Moving the camera too quickly. It gives me motion sickness and there isn't enough time for my eyes and brain to focus on any one thing." – Jill Alix, Ansonia, CT

"They go too fast from one thing to another." – Belinda Wexler, Toledo, OH

"Filming people who don't want to be on tape. All you get is people mad at you." – Mary Binkowski, Bethany, CT

"They move too fast. In their minds eye, the person taping can see the big picture, and understand why they're doing it, but the people who haven't been there don't see that." – Jack Kovalski, Tecumseh, MI

"Not enough editing. Most videos I've seen are very amateur and are uninteresting. I don't have time to watch all the details — highlights are best for me." – Amy Potokar, Westport, CT

"It's a tie between taping too long and forgetting that dialogue or narration is important. Video doesn't mean still life." – Vicki-Lynn Pagan, Stratford, CT

"Not staying still on the subject long enough, moving the camera around too much. And tilting the camera when panning." – D.F. Duck, Glenn, CA

Question #2: Which events are least worthy of capturing on videotape?

"I like videos that portray people rather than things." – Alix

"The birthday parties people tape get kind of boring after a while." – Wexler

"Every single move your kids make. You end up with 1,000 hours of the kids doing the same thing!" – Binkowski

"I am usually held captive by my brother and sister-in-law, who force me to watch every move their little boy makes. That gets old really fast." – Kovalski

"Endless repetition — how many times do we need to see little Johnny standing in the outfield — and footage of unknown persons for more than a split second. If it's not family, take one quick pan, plus one photo and label the names, because, inevitably, you won't care what the other kids looked like in your daughter's second grade class 40 years later. You'll just want to see your kids." – Pagan

"I think most everything is worth videotaping, it's just not all worth watching. Edit the video to only show the few minutes that matter, then your friends will enjoy it and will be more willing to view your home videos the next time." – Duck

Question #3: What is your definition of a good home video?

"I like to see people as natural as possible. When I catch my daughter singing or playing school, or my son focusing on his karate moves, to me, that is precious." – Alix

"Something you can save for later use — something that gives you a historical record of your family." – Wexler

"One that's shot without people acting. One in which the people are natural." – Binkowski

"One that has proper lighting, doesn't pan too quickly, isn't boring and doesn't drag." – Kovalski

"Action, action, action! Filmmaker giving play by play narrations, punctuated by close-up activity shots of family members talking, laughing, joking and giving their thoughts of the moment." – Pagan

"Subject matter of general interest to people other than the immediate family (no one but a mother could enjoy a 20-minute video of a toddler laying on a blanket). Or at least keep such video to only a few minutes." – Duck

Too Long – "I think most everything is worth videotaping, it's just not all worth watching."



Question #4: What is your definition of a bad home video?

"I don't like to see people posing uncomfortably or a video that is too distant to make out people's expressions." – Alix

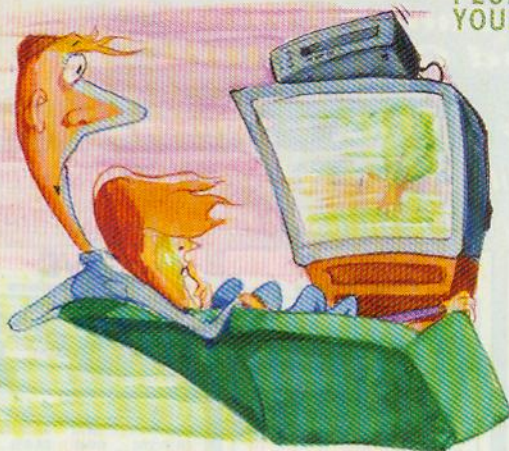
"A family gathering where there's conflict." – Wexler

"One that everyone looks into the camera and says 'I don't want to talk. I have nothing to say.'" – Binkowski

"Videos that are boring, pan too quickly and take a lot of time." – Kovalski

"Long static shots. Endless hours of other people's kids in tutus or baseball uniforms. Watching people eat or talk without being able to hear them or see the expressions on their faces." – Pagan

"Out of focus. Quick tilted pans. Staying on uninteresting or non-action subjects too long" – Duck



Whip Panning – Good home video "has proper lighting, doesn't pan too quickly, isn't boring and doesn't drag."

Question #5: How long should a home video be?

"20 minutes to a half hour." – Alix

"Ten to 15 minutes, but vacation videos are usually longer than that, because there seems to be a lot more going on." – Wexler

"If it shows action, like kids doing a sport, or an event like a music recital, then it can be longer, like 30 minutes or more. If it's like a birthday party, it gets boring after about 10 minutes." – Binkowski

"Not more than five minutes – after that, I start to get a little restless." – Kovalski

"No more than two hours. Usually watching a home movie is at the end of a busy day and I fall asleep. It's hard to sit for so long when there are other things that need to be accomplished at home and in the home office." – Potokar

"13 minutes. Less than that isn't enough – any longer, and it better have a plot!" – Pagan

"It depends. If it is a video you will be showing to friends then 10 to 15 minutes. If it is the video of the baby blowing bubbles or rolling around on a blanket and the parents will be the ones viewing it, then as long as the tape allows." – Duck ■

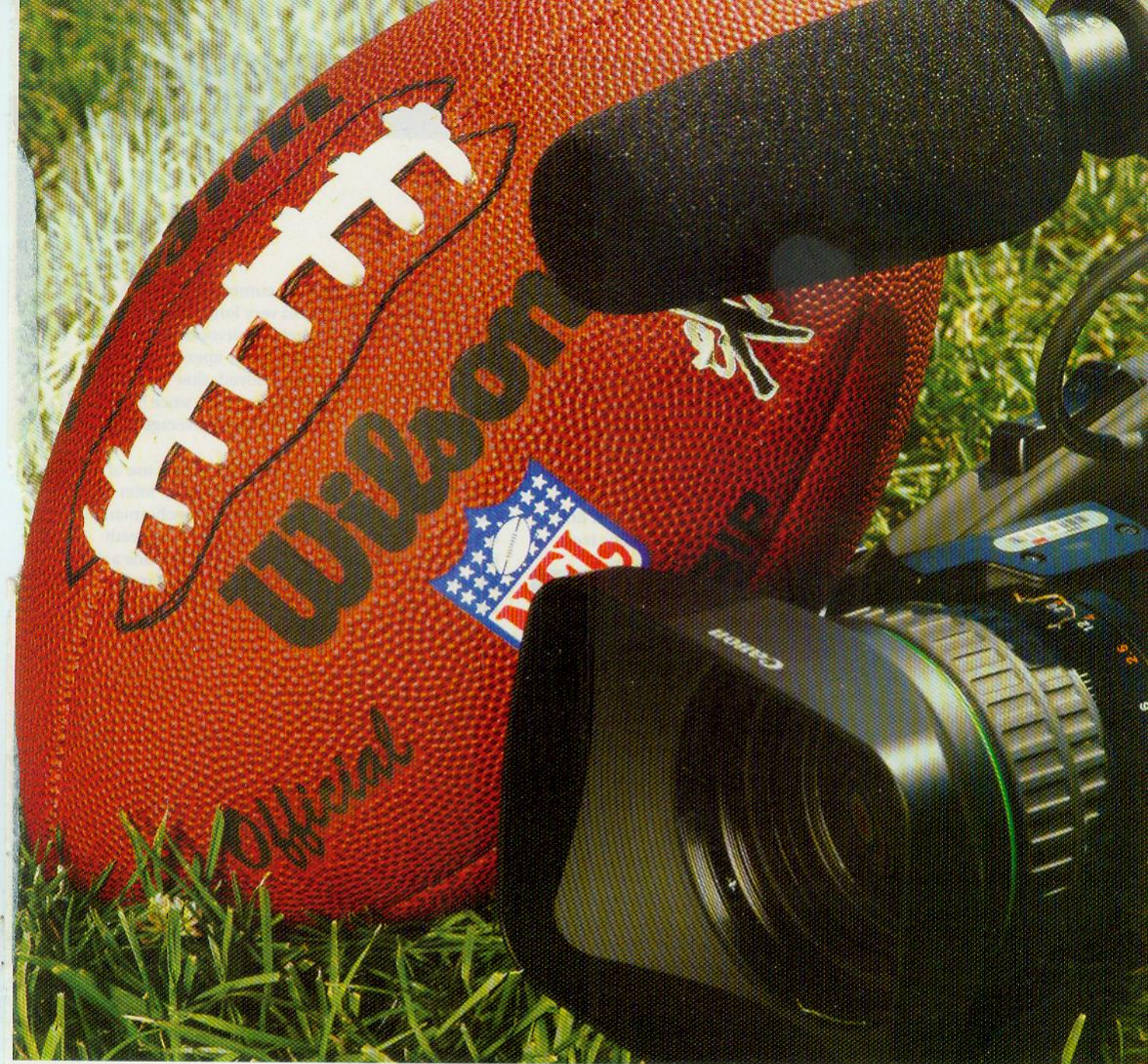


Action News – "Action, like kids doing a sport, or an event like a music recital can be longer, like 30 minutes or more."

Amanda Cuda is a professional journalist and freelance writer.

Reader Ratings

Tell us what you think. Rate this article online at www.videomaker.com/readerratings **Article #9364**



NFL films changed the way that TV, film and video crews cover sports. To understand the significance of NFL Films and its 40-year history, it helps to view a football highlight film from before the company's inception. Inevitably, you'll see black and white photography, endless long shots, few close-ups, run-on Walter Winchell-style narration, college band "rah-rah" music and plays presented from start to finish, instead of just their focal points. These highlight films typically revealed little or none of the personalities of the colorful and idiosyncratic men who played in the NFL. NFL Films changed all that with a unique and innovative approach to telling the story behind the scoreboard.

If the sports documentaries, team yearbook videos, highlight reels or even the home movies of the annual family touch football game that you produce are more like the old

SPORTS VIDEO STORYTELLING:

model, a close study of the details that make NFL Films so unique may pay very large dividends.

Kicking it Off

In 1962, Ed Sabol, a 45-year-old clothing salesman and budding filmmaker, won a bid to shoot the highlight film of the league's championship game. Pete Rozelle, the NFL's commissioner, so loved the finished product, that he eventually appointed Sabol as the NFL's official documentarian.

Ed, his son Steve and their editor-in-chief Bob Ryan (among others) introduced numerous tech-

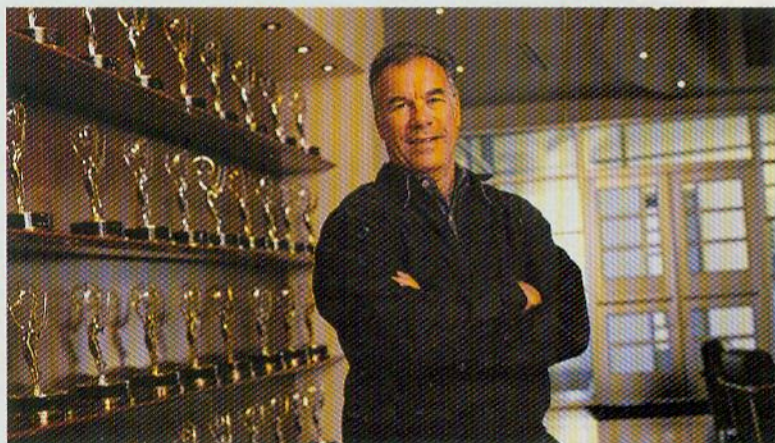


PHOTO COURTESY OF NFL FILMS

In the Details — "I filmed the first fifteen Super Bowls and never saw a play. But I could tell you what kind of hat Tom Landry was wearing, how Vince Lombardi was standing in the fourth quarter, if Bob Lilly had a cut on the bridge of his nose. Those were the things that I remember in the Super Bowl."

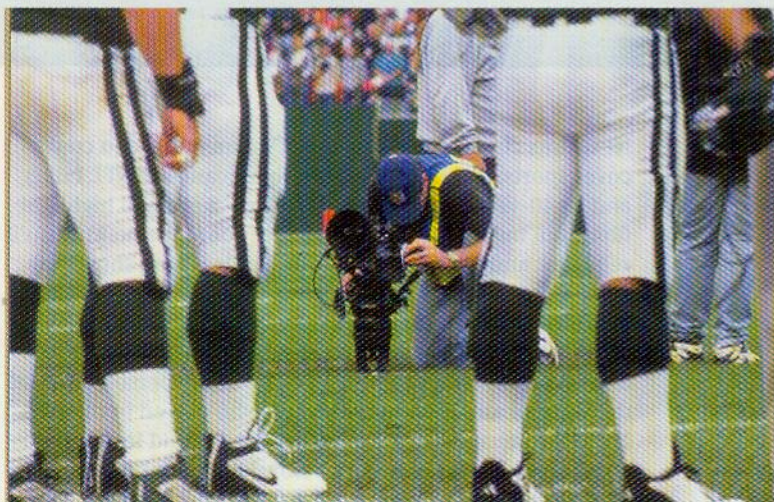


PHOTO COURTESY OF NFL FILMS

The Mole — A mole is a handheld, mobile, ground cameraman, with a 12 to 240mm lens and he moves all around the field and gives you the eyeball-to-eyeball perspective.

niques to the art of sports documentary filmmaking. This includes the use of very long and very wide lenses; the use of wireless microphones on coaches and players; cutting to the apex of each play and super slow motion. Indeed, slow motion of a sort is used on virtually every play, since NFL Films shoots all non-synched sound coverage at 32 frames per second.

The icing on the cake was their distinctive use of narration, beginning with "the voice of God," John Facenda, a Philadelphia television news anchorman who was the mythic voice of the NFL until his death in 1984. Early on, the NFL Films' producers made a conscious choice to use less narration, which made Facenda's style even more important and dramatic. Steve Sabol, now the president of NFL Films, says, "I felt that in order to make our films memorable and different, the script was going to be decreased, which meant that the voice that was used to read the script would be even more important."

As highlighted in their *Inside The Vault* series on ESPN, it took a while for NFL Films to put all these techniques together. Eventually, in 1965, they all meshed in a documentary titled *They Call It Pro Football*. Pete Rozelle screened the film, and then pulled out a piece of paper with the Neilson television ratings, which indicated that baseball was number one, college football was number two and the NFL was number three. "And Pete said, 'for the NFL to prosper, it has to succeed on television. And in order for the NFL to succeed on television, it needs a mystique. It needs a certain style. It needs an image. And the film that I just saw will help us create that image'," Sabol recalls. "And that was also as close to a mission statement as we ever got."

The Mole, The Weasel and The Tree

Generally, NFL Films only uses three cameras on a regular season game, which Sabol describes as the tree, the mole and the weasel. "A tree is the top camera," he explains. "He's on a tripod rooted into a position on the 50 yard line in the press box and he doesn't move. A mole is a handheld, mobile, ground cameraman, with a 12 to 240mm lens and he moves all around the field and gives you the eyeball-to-eyeball perspective. A weasel is the cameraman who pops up in unexpected places, to get you the telling storytelling shot—the bench, the crowd, all the details."

And it's those details that were among the first standout elements of NFL Films. "I was an art major in college, and Paul Cézanne once said that

The NFL Films Model

'All art is selected detail'. And I felt that the one thing missing in sports films were the details." So, when Sabol began shooting for NFL Films, he was the weasel. "I filmed the first fifteen Super Bowls and never saw a play. But I could tell you what kind of hat Tom Landry was wearing, how Vince Lombardi was standing in the fourth quarter, if Bob Lilly had a cut on the bridge of his nose. Those were the things that I remember in the Super Bowl."

Continued on page 92 ➔

Cataloging The Vault

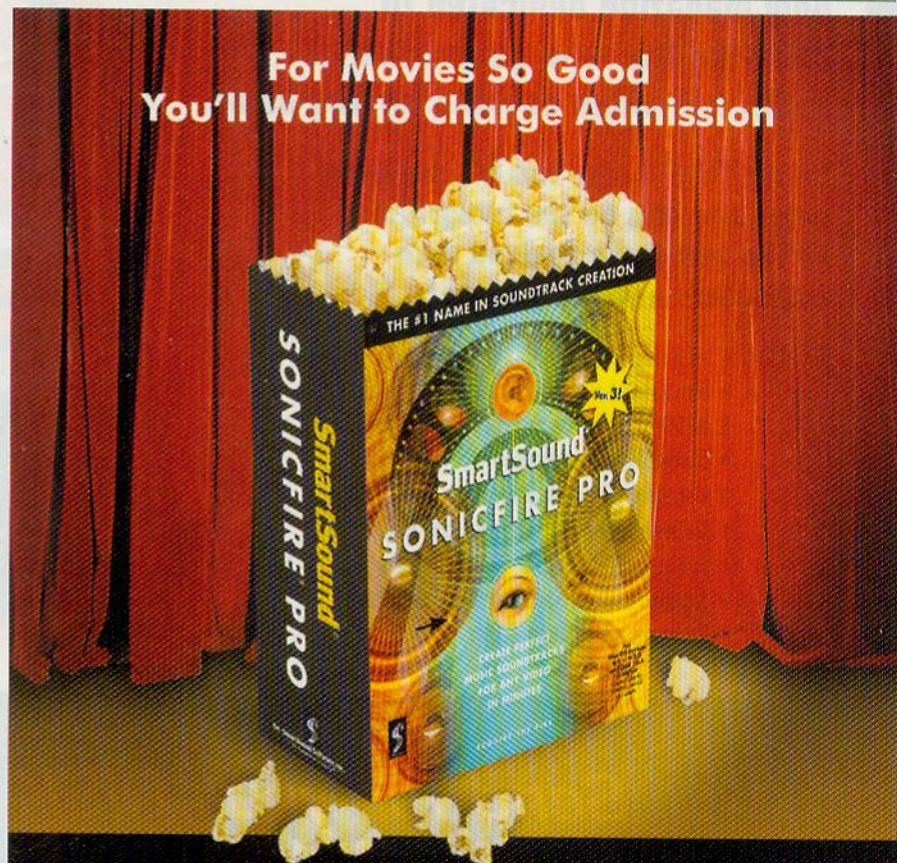
The Inside NFL Films headquarters is located in Mt. Laurel, New Jersey and has a climate-controlled vault containing football footage from 1897 to the present day, including of course, every inch of film shot by NFL Films.

Obviously, cataloging all those miles of footage is quite a challenge. In the past, the producers at NFL Films relied on the memories of long-time employees jokingly called "vault savants." Concurrent with their move to a new building, however, they've begun to catalog each shot in a computerized database. When footage is processed after each NFL game, it's cataloged with about 150 search parameters, including everything from the styles of uniforms worn to the weather, down to which advertisers' products or ads were visible in the background of a shot. Steve Andrich, NFL Films' vice president of cinematography, says the database allows producers to put in criteria that will bring up a selection of shots, and then narrow down the criteria. "You can say, 'give me Walter Payton's 100 touchdowns' if you put that in as a criterion, it will give you 100 touchdowns. Then 'give them to me at night', 'give them to me ten yards or longer'."

Knowing what shots you have at your disposal is the first step to good storytelling. Although few videographers have the vault and cataloging capabilities of NFL Films, you can organize your library in a similar way with programs such as Video-Wiz (www.thirdwaveideas.com).

"Storytelling is basically done through the editing. It's the cameraman's job to come back with as much material as he possibly can."

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▶ HOME VIDEO HINTS

by Michael Fitzer



looking to produce something with a more professional look, consider creating your own in-camera transitions as a way to help tell your story with style.

This article will explain how to create some basic in-camera transitions as well as set the stage for you to try out some of your own on your next production. Using in-camera transition techniques doesn't mean that you have to shoot your project in a linear fashion, editing everything with the pause button on your camera, but it does mean that you can't just add it in post. While the name may be slightly misleading, in-camera transitions use organic, rather than digital sources as the primary elements to transition between two shots. When you want to use in-camera transitions to help tell your story, it's vital that you plan ahead.

Put the Body to Work

Imagine that the sequence you're shooting calls for the following:

- A woman must get up from her desk,
- walk out of her office,
- and enter the office of a co-worker.

It's a fairly simple sequence of events that, if you're not careful, could turn into a fairly boring sequence of events. A standard way to move the scene along is to instruct the woman to:

1. Get up from her desk.
2. Exit the frame to either the left or the right.
3. Enter her co-worker's office from either the left or right. ➔

In-Camera Effects

Shoot and edit your own transition effects.

Take a moment to cast your mind into the recent past. Remember the last big Hollywood movie you watched? Remember the characters? How they made you laugh or cry, grab the seat in terror or turn your head in tense anticipation?

In-camera transitions use organic sources as the primary elements to transition between two shots.

Okay, now think a little more. How was the film edited? Did you notice any digital transition effects, like the page peels or heart wipes that you have on your editing system? It's a safe bet that the last film you watched didn't utilize any of those types of transitions. Chances are, the last time you saw a page peel or a star burst transition on television it was to advertise the lowest price at your local used car lot.

The CG (computer generated) transition effects commonly found on your

home editing system certainly work. Flips, peels, wipes and all the rest visually transport your viewer from one scene to the next and help to move your story toward its conclusion. However, unlike cuts and dissolves, most CG transitions tend to be visually jarring, calling attention to themselves and distracting the viewer from the flow of the content of the production. The next time you're shooting a 1970s disco spoof, feel free to spin or slide your way from beginning to end, but if you're

Plan for Success

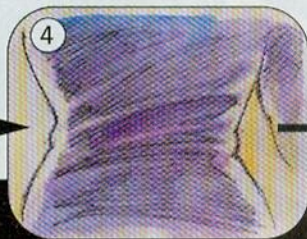
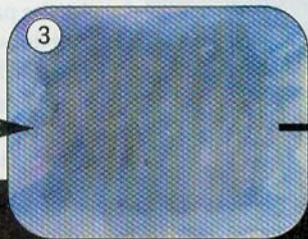
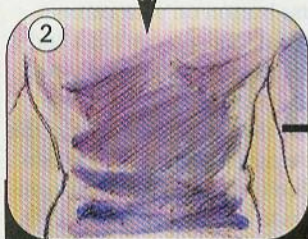
Planning your in-camera transitions before you shoot will accomplish some important objectives.

- You're sure to have a smoother shoot because you'll know exactly how to visually get from one scene to another without waiting until the edit to figure it out.
- When you get to the final edit you'll be less tempted to use the cheesy CG transitions that came with your editing software.
- In-camera transitions don't require the rendering times involved with visually complex CG transitions such as peels and wipes.

HOME VIDEO HINTS

Knowing that a transition effect is a great way to spice things up a bit, instead of using a cut between the woman leaving her own office and entering the office of her co-worker, you might be tempted to drop in a ripple effect on your transitions menu when you finally get to the edit. Alternately, you could direct the woman to do the following:

1. Get up from her desk.
2. Walk directly at the camera until she completely blocks the lens with her body.
3. The frame goes to black.
4. Starting with her back against the camera, walks away.
5. Walks into the office of her co-worker.



TRANSITION

While you will need to edit the shots to make them flow as a scene, the second scenario accomplishes a transition from one location to another by using your actor as a dip to black rather than relying on a CG transition.

Camera Movement as a Transition

Let's get out of the office for awhile and move to a livelier location for this next example. Imagine your next scene calls for the following:

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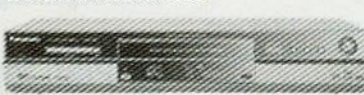
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Leave Them Guessing

Try using a dry-erase marker and a reference monitor to match the shape of objects in your frame, like two tires on two different cars. Once you've matched the position on your reference monitor by using the dry-erase marks, cut or dissolve between those objects to make a dazzling transition effect. It takes some practice but once mastered, it's one in-camera transition technique that will leave your audience asking "How'd they do that?"

- A group of guys are watching the big game at the local pub.
- A waiter delivers mounds of food and drink to the table.
- The guys get sick from eating too much and are now unable to enjoy the game.

Rather than film the guys eating and drinking for the next hour, you need to indicate the passage of time with a transition. As with our previous example in the office, you could direct and edited any number of ways, but for now, consider these two examples:

1. Shot of guys watching the game.
2. Waiter delivers mound of food and drink to the table.
3. The guys dig in ravenously.
4. Wipe to the next shot, all the food is gone and the four guys are looking none too well.

Unlike cuts and dissolves, most CG transitions tend to be visually jarring.

With this example, you've covered all the bases. The use of the CG wipe helped indicate the passage of time and if the actors were any good, you've got a nice comedic sequence. However, the following in-camera transition technique could add a bit more meat to the scene. ►

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▶ HOME VIDEO HINTS



1. Waiter delivers mound of food and drink to the table of guys watching the game.
2. The guys dig in ravenously.
3. Briefly pan the camera over to the television.
4. Pan immediately back to the four guys sitting around their messy table. The food is all gone and they are looking sick.

Here's the trick: with empty plates and mugs on standby, when you pan the camera to the television for just a few seconds, another member of your crew quickly switches out the full plates and mugs for the empty ones. Or, if you don't have the extra helpers available, simply leave the props on the floor at the feet of your actors. While you're panning the camera, have your actors make the switch (just remember to take care not to shoot the floor).

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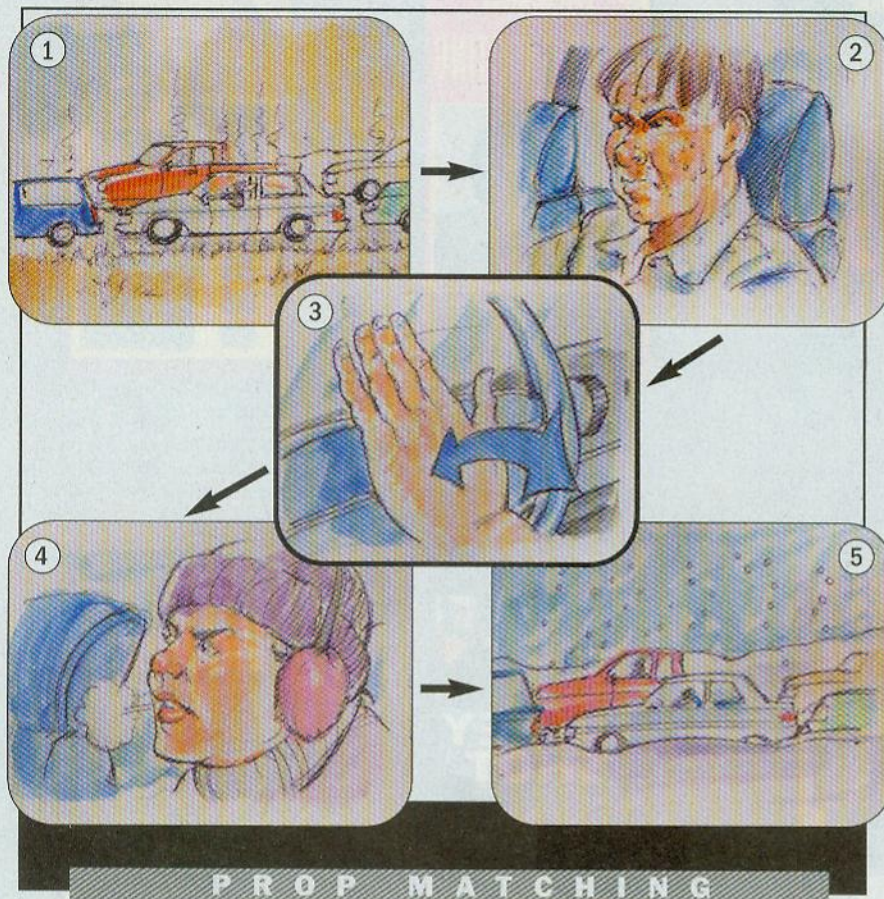
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PROP MATCHING

While this technique may take a few practice runs to get the timing just right, a simple pan is enough to make your viewers take notice and appreciate the extra effort.

Prop Matching

Another technique you can attempt is sometimes called prop matching. Imagine this:

1. An irritated driver is caught in a traffic jam.
2. Sweat pours off his forehead from the summer heat.
3. Cut to a hand as it slams onto the car horn.
4. Pull back from the hand to reveal an angry female driver bundled in winter clothes.
5. She's in a car identical to the one we just saw being driven by the angry man.

While the immediate surroundings and circumstances for these two drivers are practically identical, their locations may be thousands of miles apart. This

in-camera technique has enabled you to take your viewer across a great distance in the matter of a split second. The cut works because the two scenes are radically different, but the prop between the two is the same.

Give it a Try

Before embarking on your next shoot, plan to use one of these easy examples — or conjure up an in-camera transition of your own.

The right one will add a completely new dimension to your next video production, and will most certainly please your viewers. ■

Mike Fitzer is an Emmy Award-winning writer, director and producer, and is a partner at Blackfish Films, LLC.

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by Bill Davis



Desktop Editing FAQ

If video editing is anything, it's a fast-moving target.

New technology introductions and revolutionary advances in the state-of-the-art sometimes seem to happen on a monthly or sometimes even a weekly basis. And for many of us, that means constantly challenging our ideas about

obvious, but time after time, I've seen beginners debate the need for features that are miles beyond what they'll ever really use.

For example, let's say you're assembling a system to make simple training videos. The fact that the editing program in consideration can handle 99 tracks of audio is cool, but not particularly important. You can probably work for years making superb training videos and never

need more than half a dozen discrete audio tracks.

On the other hand, if your vision for your video career includes working towards projects that require a great deal of audio scoring, such as feature films or music videos, you might want to place multiple audio track access higher on your list of must-have features. Never let the "feature wars" make you think that just because product A has a feature that product B lacks, that product A is better than B. For example, many of the features listed on the side of the box of professional editors are for HD broadcast television. If your producer has not already lined up the financing to produce HD television, don't worry about this feature.

Ask the real question: "What features do I need, considering the type of work I'm likely to be doing in the foreseeable future?" In truth, nearly all of today's popular editing packages have all the features you'll ever need.

Q. I have some money and want to upgrade the quality of my productions – what will give me the biggest "bang for the buck" when it comes to investing in new production capabilities?

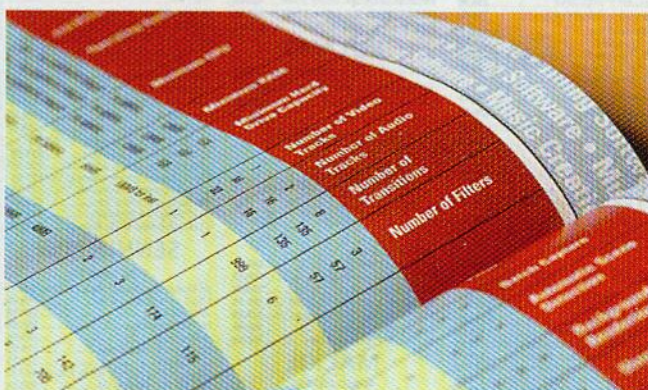
A. Great question. In the not-so-distant past, the answer may have been to buy superior acquisition equipment. Today, with inexpensive digital camcorders that create excellent pictures, and a dig-

The most important features for any system are the ones you'll need to use most often.

the best techniques, strategies and gear to create our videos. Here are the answers to a few frequently asked questions that might help you make sense of this fast moving industry.

Q. Which features are most important in a modern digital editing system?

A. The obvious answer is that the most important features for any system are the ones you'll need to use most often to get your work done. This may seem



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ponder something they've just seen before new material is introduced.

One factor that affects any program's pacing is the clarity of the elements of presentation. If the characters and their situations are understandable, if the actors are natural and convincing, if on-screen text and graphics are well designed and easy to read, the audience can take in the presented information more quickly and be ready to move on.

If, on the other hand, there are problems with the clarity of the presentation, the editor has to slow the flow of information to let the audience catch up. I got a reminder of just how good most audiences are at assimilating information when I recently bought my son a DVD package containing the first few seasons of the *Rocky and Bullwinkle* show. As we sat down to watch this television classic, it struck me just how quickly it was paced. William Conrad, the show's narrator has a machine-gun quick delivery, as does virtually every other character in the program.

**Faster isn't always better.
But too slow is almost
always the kiss of death
for a program.**

If all the kids and adults who grew up on this classic program could handle that rapid fire pace of delivery – I suspect that today's kids and adults can as well. Faster isn't always better. But too slow is almost always the kiss of death for a program.

Okay, I've saved the hardest and most frequently asked digital video question for last.

Q. What hardware is best for desktop video work?

A. This is the granddaddy of all of the commonly-asked desktop video questions. If you follow Internet and news-group discussions you'll find that this question pops up far more than any other. The problem is that it's impossible to answer, for lots of reasons. Here are two big ones. ➔



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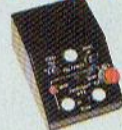


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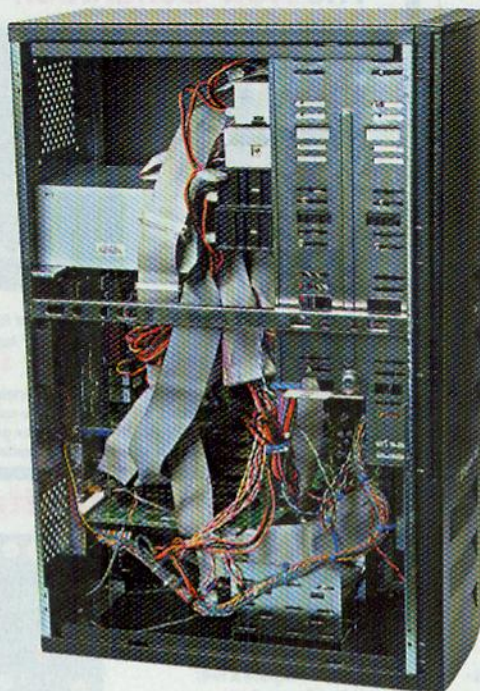
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▶ EDITING



Inside the Box — Video editing computers can be more complex than general-purpose machines. This 1 Beyond box has Canopus DVStorm hardware and a hard disk RAID.

For camcorders and computer-based editing gear, regardless of the brand or model you buy, this year's state-of-the-art is likely to become next year's closeout bargain.

We said it once and we'll say it again: Generally speaking, you should get the fastest CPU and the largest hard drive(s) you can afford. But even if your editing system is a couple of years (and a couple of technology revs) behind the current gear, it's probably still capable of turning out great video.

First, it's difficult to answer because desktop video production isn't one thing, it's a term that covers a vast range of tasks and processes. Different practitioners need different capabilities. And the system solution that's perfect for one user might easily be too much or too little for another. Even if you discover that your needs are very similar to

And that's the point of the whole exercise, isn't it? If you're preparing to purchase your first editing system, don't fret too much about the fact that something newer will be appearing soon. Revel in the fact that nearly all desktop video equipment sold today is vastly more advanced than anything past generations of video editors could hope to acquire and use.

Generally speaking, get the fastest CPU and the largest hard drive(s) you can afford.

others and you're tempted to shortcut the process by just following their advice, you'll quickly run into the second problem: State-of-the-art in the video arena is an unbelievably fast moving target. Generally speaking, get the fastest CPU and the largest hard drive(s) you can afford.

Twenty years ago, I had a friend who owned a high-end stereo shop. We used to talk about gear having a five to ten year product life span. Today, for most consumer electronics, especially video (think: DVD), the product life span might only be months.

One sure truth is that the key factor in making great video isn't the equipment you use. The equipment doesn't make your video — you do. So what you're doing right now (reading a copy of *Video-maker*, learning about the video editing process itself) is vastly more critical to your success than the specific equipment you use.

The very best advice you can get about editing equipment is to buy the best system you can afford, as quickly as you can, and get started on the real secret to becoming a successful videographer: experience. ■

Contributing Editor Bill Davis owns and operates a video production company in Arizona.

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▶ LIGHT SOURCE

by Jim Stinson



Three-Point Lighting Designs

For individual subjects, nothing beats the tried-and-true combo of key, fill and back lights.

Classic three-point lighting (key, fill and back light) is sometimes dismissed as “yearbook lighting.” True, it can look hokey in story videos, but whenever you have a narrator, a spokesperson, an interviewee or anyone who stays in one place and talks, three-point lighting is bullet proof.

Why? The small-source key light models the face, adding dimensional-

ity and character. The large-source fill light moderates shadows and reduces overall contrast. The small back light dusts hair and shoulders with enough light to separate the subject from the background. In addition, the slightly theatrical feeling of this lighting style makes the subject more interesting by literally putting them in the spotlight.

So let's look at strategies for placing and controlling the classic three-point instruments: key, fill and back.

Key Light

Because the key light delivers the basic illumination of your scene, you should place it as if it were the only light on the subject. That means anywhere from 10-45 degrees off full-front, horizontally (Figure 1) and maybe 15 degrees above horizontal. Tip: For fat or wrinkled necks, raise the key light a bit higher to darken the neck shadow.

You should place the key light as if it were the only light on the subject.

How far back should it go? Start with a distance that doesn't make a subject-held white test card flare out and then adjust to taste when you have the other light in place.

A spotlight works well as a key light for several reasons. First, as noted, a directional light molds subject features. Second, the focusable lamp allows some modification of both intensity and directionality. Finally, the attached barn doors let you control light spill.

If the light is a bit too harsh, you can soften it a skosh by clothes-pinning a sheet of spun glass or milky plastic to the barn doors. You can also make the light

Light Kit Manufacturer Listing

ARRI
www.ari.com

Cool-Lux
www.cool-lux.com

Dedolight
www.dedolight.com

De Sisti
www.desisti.it

Frezzi
www.frezzi.com

Interfit (distributed by Paterson Photographic)
www.patersonphotographic.com/lighting/lighting.html

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www.colortran.com

Lowel
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LTM
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Means Street/Gyoursy Lighting
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Mole-Richardson
www.mole.com

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www.pagusa.com

Photoflex
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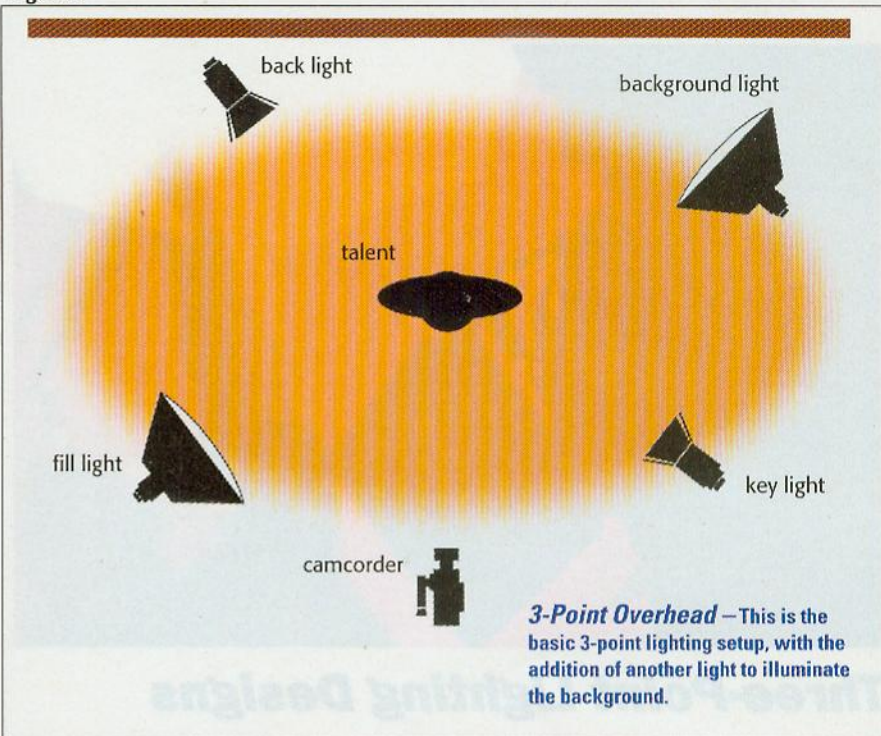
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Lights 1, 2 and 3



The first shot (top) looks good, with a nice soft light. The second shot (middle), uses a backlight that brings the talent out from the background. The last shot (bottom), adds a fill light to complete the picture.

Figure 1



fall off toward the bottom of the screen by placing a graduated screen in the filter ring behind the barn doors. But don't overdo it: if you soften a spotlight beam until it works like a softlight, you might as well use a soft light instead.

Fill Light

The fill light cuts contrast by lighting the off-key side of the face and filling in eye, nose and neck shadows. To do this, the fill needs to be about level with the subject's face (Figure 2). A fill light can work anywhere from 5-60 degrees to the

The instrument you choose for a fill light depends on your lighting style.

side opposite the key. In general, I like to place the fill light closer to the front than the key light.

Here again, watch the monitor. The goal is to show detail in the darker side of the face and soften shadows, but without wiping out the modeling achieved by the key light. Ideally, the fill side of the face should seem to be natu-

rally shadowed from ambient light, rather than lit with a second light. To adjust the fill, move it toward or away from the subject and check your monitor frequently.

The instrument you choose for a fill light (assuming you have a choice) depends on your lighting style. If the key is a spotlight without diffusion, then a second spot, suitably softened by spun glass or gel, works well as a fill. For a softer overall design, I prefer an umbrella or a softbox as large, diffuse light sources. The umbrella tends to look slightly less natural than the softbox, but it all depends on the feeling you want.

Back light

The back light (i.e. "rim light" or "kicker") is usually another small spotlight, placed high and behind the subject. I like to place it on the same side of the key so that the harder, more directional light is all coming from one side. A typical position is perhaps 150- degrees away from the front (Figure 1) and 85- degrees high (Figure 2).

In placing the back light, the goal is to (a) keep its support out of the frame, (b)

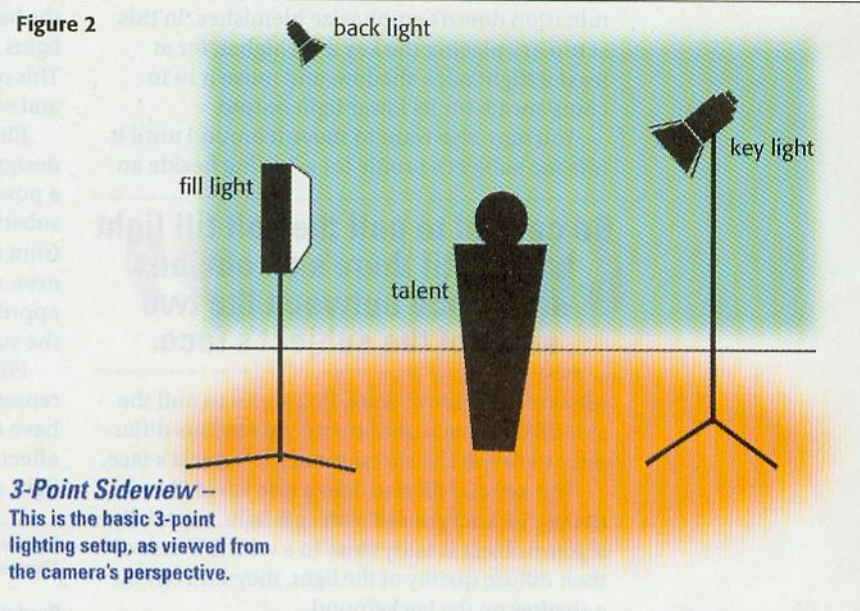
balance its intensity with that of the other two lights and (c) keep the light from reflecting on the camcorder's lens, thereby creating a lens flare. To conceal the support, you can mount it on a light- or C-stand with a lateral arm. With an alligator grip mount, you can often clip it to the top of a nearby door, or even to the metal grid supporting a drop ceiling. If all else fails, simply move it as far to the side as practical and then zoom in until you exclude it.

To balance intensity, you can focus the lamp, or use metal screens (don't use diffusion or you'll defeat the pur-

You can get a soft, window light feeling by using soft boxes for the key as well as the fill.

pose of the light) or try a dimmer. Don't use diffusion or you'll defeat the purpose of the light. You can easily make a dimmer one by mounting a 15-amp capacity wall dimmer in a J box, with a male-plug pigtail coming in and a female pigtail going out. (I prefer a large plastic J box screwed down to a 12x12-inch plywood base.) Dimming the back light to reduce the output will lower its color temperature, but a slight golden sheen often looks very suave.

Figure 2



To keep the light off the camera lens and avoid lens flare, you can often adjust the top barn door on the back light. If that doesn't work or if your back light doesn't have barn doors, try shading the lens itself with a flag on a stand next to the camcorder.

If all else fails, you can move the back light off to one side and lower it, if need be. The result is called "back-cross lighting," and it can do much of a back light's job quite effectively.

Alternatives and Cheats

You may want to modify this classic three-point setup, either for a different look or because you're short of lights, location power or both. For example, you can get a soft, window light feeling by using soft boxes for the key as well as the fill.

A soft key light has its advantages. It looks less theatrical than a spotlight and it's kind to wrinkles and less-than-perfect skin because its shadowless illu-

The Fourth Musketeer

Just as the famous Three Musketeers were really four, a three-point lighting setup often needs a fourth component: a background light.

If you're working close to a wall, spill from the key and fill lights may automatically light the background for you. If the background's too dark, however, your subject may look artificially isolated by the foreground lighting. In that case, you need to bring up the background.

The simplest approach is to place a large white reflector out of frame, where the key light will bounce off it and onto the wall. For more control, try a large source like a softbox, well behind the subject and out of frame. If the result looks too hot, try aiming the light up at 45- degrees, bouncing some of the light off of the ceiling.

A variation is to place the light close to the wall and rake across it. This only works if the wall near the light is framed off, because it will otherwise look unrealistically bright.

You can also try the same trick from high above the center of the wall, aiming down. In effect, this "rim lights" anything on the wall (e.g. fixtures or pictures). In fact, you can sometimes make the back light do double duty by opening its wall-side barn door to allow light to spill onto the background.

However you place your lights, check your reference monitor carefully for hot spots and reflections that will attract the viewer's eyes away from the subject. A too-bright wall is worse than one that's too dark.

mination doesn't emphasize blemishes. In this setup, try placing the key a bit higher, for at least a slight neck shadow, and move it in to compensate for its lower light output.

You may also want to move it around until it hits the subject's profile for a "sitting beside an

Be careful to pull the soft fill light back until there's an obvious difference between the two sides of the subject's face.

off-screen window" look. Be careful to pull the soft fill light back until there's an obvious difference between the two sides of the subject's face.

Soft key and fill also does a fine job of illuminating the background with spill light, especially if your subject is fairly close to a wall. Because of their diffuse quality of the light, they won't throw a shadow on the background.

To reduce the number of lights required, you have two options. For a more natural look, omit

the back light. You'll reduce both the number of lights and the power consumption by one-third. This option works much better with the soft key and soft fill approach.

Eliminating the back light from a hard-key design can make the setup look incomplete. As a possible alternative, omit the fill light instead, substituting a large, white card to reflect light from the key light back onto the subject. However, the framing must be fairly tight for this approach, because the card has to be quite near the subject.

Finally, before we shut down for today, remember that the subject does not always have to be stationary. You can get a very nice effect by having the subject walk into the three-light setup (guided by a mark on the floor). ■

Contributing Editor Jim Stinson is the author of the book, *Video Communication and Production*.

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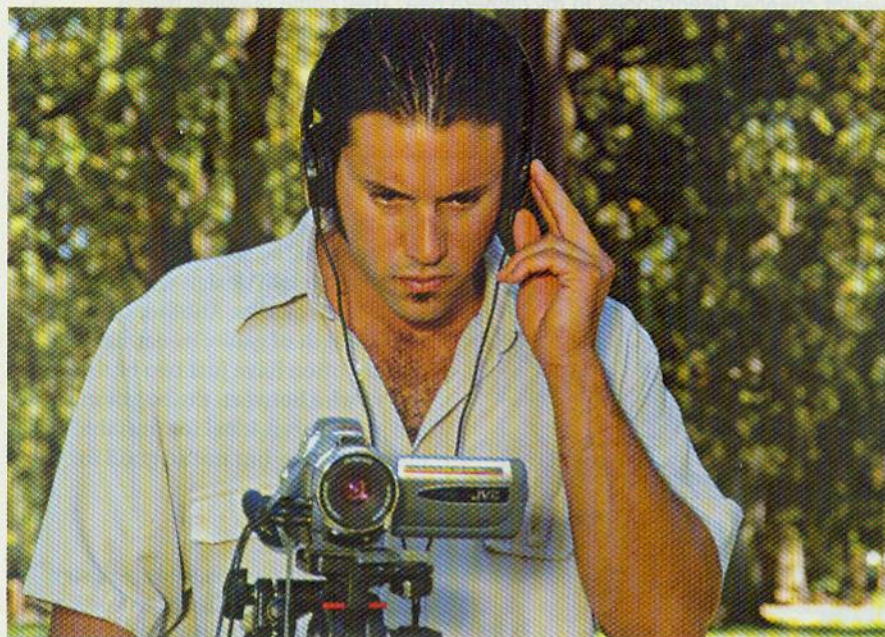


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► SOUND ADVICE

by Hal Robertson



categories. As to how they fit, there are three specific headphone categories. The circum-aural design completely covers your ears with a large, cushioned cups. These headphones are generally considered the best choice for high-isolation situations like live events, concerts and outdoor shoots. The full cover over the ears is also quite comfortable and allows for long listening sessions. The only drawback to this design is weight and size. They can also make your ears perspire quite a lot.

With an on-the-ear-fit, supra-aural headphones are one of the most common headphones you'll see being used with portable music devices. Since they fit on the outside of your ears, but do not wrap around them, this type of headphone cannot isolate you as well from outside noises. In quiet environments, the sound quality from a good pair of supra-aurals is often amazing. In fact, some of the best sound available in headphones today is from supra-aural designs. On additional benefit is the variety of available headbands. Several manufacturers now offer a behind-the-head headband that simply hooks the headphones over your ears. This is an excellent option if you're wearing a cap or just don't want to muss your hair.

Finally, there is the in-ear type, often called ear-buds. Although there are many excellent in-ear headphones on the market, you won't find the good ones at your local MegaMart or elec-

A Listening Ear

Finding and buying the perfect pair of headphones.

Raise your right hand and repeat after me: "I promise to always keep headphones in my camera bag and to use them on every shoot." You'd think everyone would know this by now, but there are diehards and new shooters who simply haven't learned this lesson yet. Here's the short version: a good pair of head-

phones can save your bacon on a high-pressure shoot and are invaluable in many other areas of production. They truly are an investment in the final quality of your video sound. Unless sound just isn't important to you.

Fit and Finish

Headphones are not one-size-fits-all items. There are many different types and styles, in addition to various price

Videographers that shoot footage without the aid of headphones risk low-quality audio.

phones can save your bacon on a high-pressure shoot and are invaluable in many other areas of production. They truly are an investment in the final quality of your video sound. Unless sound just isn't important to you.

Seriously, videographers all over the globe shoot footage every day without the aid of headphones. At the very least, they're risking low-quality audio with unnecessary noise or hum. In the worst

Circum-aural Headphones –

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The Good, The Bad and the Ugly

For the longest time, I carried a pair of lightweight cheapie headphones in my camera bag. They came bundled with a portable MP3 player and I hated the way they sounded, but they were free and I had to have something to monitor video sound. Those horrible little 'phones traveled thousands of miles in my camera case – even overseas – and as much as I hated them, they did their job. So, am I a headphone hypocrite? No, I finally upgraded to very nice folding model from a major manufacturer, but the moral of the story is, virtually any pair of headphones are better than no 'phones at all.

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tronics retailer. The typical ear-bud you'll see on the street is an inexpensive, lightweight design with questionable sound quality. Another downside is the length of cable: in-ear headphones often have just two or three of feet of wire between the earphone and the plug. This is ideal for portable music players, but not so good for your video camera.

Testing, 1-2-3

Regardless of the headphone design you choose, listen closely before you buy, since all headphones are not created equal. If you're just grabbing a utility pair for confidence monitoring, this is less of an issue, but if you're spending more money on headphones



Supra-aural Headphones –
These are light and compact.

than you have for lunch this week, take some time to listen for the differences.

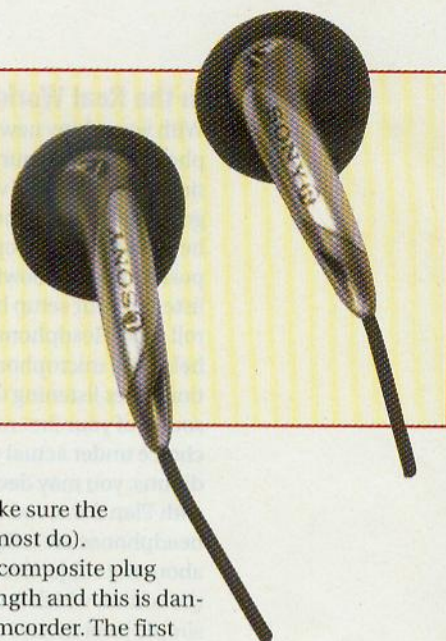
The first step is to find a couple of stores in the area that have multiple headphones on display, preferably with a CD player you can easily access. Take some of your favorite music and try several different pairs. It won't take long to hear a radical difference in the various models and styles.

With your shiny new headphones around your neck, it's time to shoot some video.

Your task is to balance the price against sound quality, fit, comfort and durability. Keep in mind that most of your video sound monitoring will be for voices. A natural, flat sound quality without much hype is ideal for this application, but may not sound as cool on your Peter Gabriel collection, where enhanced bass response might be more desirable.

Don't forget the connector. Most, if not all, camcorders have only a 1/8-inch headphone jack for monitoring. This is a flimsy situation, but one you cannot change. If the headphones you want only

Inter-Aural—Also called "ear buds," these tiny headphones are certainly better than nothing.



come with a 1/4-inch plug, make sure the package includes an adapter (most do).

Unfortunately, the resulting composite plug could be five or six inches in length and this is dangerous to the health of your camcorder. The first time someone bangs up against the headphone plug, you'll break something, maybe something that is expensive to repair.

As an alternative, stop by your favorite electronics retailer and buy a short headphone extension cable that you can use in addition to the 1/4-inch adapter. ➔

Headphone

Manufacturer Listing

Compiled by Charles Fulton

Aiwa
www.us.aiwa.com

AKG Acoustics
www.akgusa.com

Altec Lansing
www.alteclansing.com

Andrea Electronics
www.andreaelectronics.com

Audio-Technica
www.audiotechnica.com

Beyerdynamic
www.beyerdynamic.com

Bose
www.bose.com

Coby
www.cobyusa.com

Cyber Acoustics
www.cyber-acoustics.com

Denon
www.usa.denon.com

Earhugger
www.earhugger.com

Fostex
www.fostex.com

Gemini Sound Products
www.geminidj.com

Grado
www.gradolabs.com

Inland
www.bencole.com

JVC
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Koss
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Labtec
www.labtec.com

Maxell
www.maxell.com

Micro Innovations
www.mic-innovations.com

Nady
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Numark
www.numark.com

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www.panasonic.com

RCA
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Samson
www.samsontech.com

Sennheiser
www.sennheiserusa.com

Sony
www.sonymstyle.com

Yamaha
www.yamaha.com

This is a sampling of headphone manufacturers. It is not a complete list.

In the Real World

With your shiny new headphones around your neck, it's time to shoot some video. A good pair of headphones will help you with microphone positioning by allowing you to listen to your setup before you roll tape. Headphones can even help with microphone selection. After listening to the sound of your first microphone choice under actual shoot conditions, you may decide to go with Plan B instead. And here headphones are telling you about the subjective quality of the sound, which is something simple level meters cannot do. Of course, headphones are an excellent way to check for dead mike batteries, noisy connections and nasty hums and buzzes. All these help to improve the quality of your video sound.

And don't forget, there are other practical uses for your new headphones. During narration recording, you or your vocal talent may want to use headphones to monitor as you record. This helps the talent by allowing them to hear the effects of microphone position on their voice. You can also spot noisy paper shuffling, background and other noises more easily with headphones.

Although you may have excellent speakers on your video editing system, headphones are like



Standard Equipment—Headphones should definitely be a part of your gear for every shoot that requires audio.

a microscope and can help you during audio editing. Listening with tiny speakers on your ears is an exaggerated perspective on your sound and can help identify breaths and other odd noises in your audio track, things you might easily miss on speakers. (Note: Head-

Listening with tiny speakers on your ears can help identify breaths and other odd noises in your audio track.

phones are not recommended for tweaking the final mix, however.) Headphones are also great for privacy and isolation if you're editing in a noisy environment. If you're the brave sort who edits video on a laptop, headphones are an essential part of your production environment.

Regardless of whether you need them for confidence monitoring, narration recording or just to kick back with some tunes after a long day of editing video, headphones are an important part of any videographers kit. Find a pair that best fits your specific situation and make friends with them. They will save you grief and pain on a regular basis. ■

Contributing Editor Hal Robertson is a 20-year audio and video production veteran and owns a media-production consulting firm.

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A Hint From The Professionals

Ever wonder what kind of headphones the pros use? Probably not, unless you're an audio geek, but it's pretty easy to find out these days. Stop at the local video rental store and find a couple of famous-name movies that contain making-of documentaries. Watch closely and you'll see the audio person and possibly the director wearing their headphones of choice. Manufacturers and models are all over the map, but Sony MDR-7506 headphones seem to be fairly common. This model is the darling of the professional sound industry for its durability, comfortable fit and excellent sound quality. Or, you can pretend to be Stephen Soderberg and use the headphones that came with your portable stereo.

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SPORTS VIDEO STORYTELLING: The NFL Films Model

Continued from page 63



PHOTO COURTESY OF NFL FILMS

Technology or Story—The basic ideas of good stories, and a good storyteller, will never change.

And it's those little things that everyone remembers about each Super Bowl, largely thanks to NFL Films, whose highlight films are rerun endlessly on ESPN during playoff season.

Tell Me a Story

Not surprisingly, Sabol believes that NFL Films is all about storytelling. "Storytelling is basically done through the editing. It's the cameraman's job to come back with as much material—storytelling shots, action shots—as he possibly can." At that point, editing becomes "so critical, and it's one of the most overlooked art forms or disciplines in filmmaking. Most people don't understand editing; they understand writing, they understand music, they understand cinematography. But when it comes to editing and the selection and order of the shots, that's the key to storytelling."

Adding Excitement to a Blowout

How do you take a Super Bowl blowout, and turn it into a great highlight film? A classic example was

Super Bowl XX, where the Chicago Bears crushed the New England Patriots, 46 to 10. The game itself was decided before halftime—heck, probably before the pregame show. But NFL Films pulled out all the stops to turn that rout into a great half-hour documentary: coaches and quarterbacks wired for sound; narration, multiple camera angles and animation diagramming key plays; super slow motion; post-game interviews and larger-than-life music.

Those Super Bowl films illustrate that as long as people play sports, there will always be great stories to be told—even if it takes a little extra effort to dig for them. The trick of course, is finding new and unique ways to present those stories. While technology continues to advance, Bob Ryan says, "The basic ideas of good stories, and a good storyteller, will never change." ■

Edward B. Driscoll, Jr. is a consultant in the consumer electronics industry.

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IN BOX

Continued from page 6

appliances are easy to use. The ScreenPlay has an award-winning interface, which is the only appliance with a drag-and-drop storyboard.

The real time editing and real time input/output makes the ScreenPlay a snap to use. Applied Magic has also developed alliances with third party companies like Innovision (improved Graphic Generator), Panasonic (DVD recorders) and Digital Juice.

The price comparison was misleading as well. ScreenPlay Wedding Edition was listed in the article for \$4,695, but that price includes much more than the other products. This special edition includes a DVD recorder, jog shuttle, Digital Juice Motion backs, Pan and Zoom, A/B Roll effect (for 2-camera editing) and many more extras the other companies do not even have available or include in their price.

In summary, the article did a fine job explaining the advantages of editing with an appliance. Applied Magic has appliance tools for editing, recording and duplicating which is usually faster, easier and more reliable than a PC.

Craig Moffat
General Manager
Applied Magic
Carlsbad, CA

Thanks

Kudos to the staff. The instructional articles published in the September 2003 issue of **Videomaker** are great: Basic sound recording tips, DV advantages, how to composite, improving lighting, etc. Great stuff. I can't wait to experiment with compositing (beyond text, that is). I've been a video enthusiast for nearly two years, and I could have really used this information when I first started; what took you so long?

I plan to upgrade my NLE workstation in 6-12 months, and after your review, I'm even more inclined to upgrade my copy of Ulead MediaStudio 6.5 Directors Cut to MediaStudio Pro 7. Thanks for telling me what I wanted to hear.

Keep up the good work!

T. J. Borek
from the Videomaker Forums

▶ TAKE 5

by Chuck Peters

Super-Human Editing Tips

Being a good video editor is a lot like being a superhero. In fact, truth be told, the best editors are the Clark Kents of the production process, saving the day with super-human feats of wonder, while maintaining an unassuming outward appearance.

Here are five tips for video editors and superheroes alike. If you strive to be either, observe these five basic tenets and you will surely attain legendary status.

Be invisible

Like the coolest superheroes, good editors should have the power of invisibility. That is to say, when viewers watch a masterfully edited program, they should not notice the edits (and certainly not the editor). Cuts should be paced properly and flow naturally. Special effects and flashy transition should be used only when specifically called for by the content: Invisible is always the better option. Whether you're out to foil a diabolical deed-doer or create a professional program, don't call undue attention to yourself. The next time you sit down to edit, remember to slip on your cloak of invisibility (just don't forget where you put it down).

Be consistent

Have you ever noticed that superheroes always wear the same outfits? While they may not be very creative when it comes to wardrobe, they are incredibly consistent. Take Superman for instance: blue tights, blue shirt, red shorts, red boots, red cape and a big "S" on his chest. And it's always the same. You'll never catch him flying in to save the day draped in purple and green (after all, those are the Hulk's colors). While the analogy isn't exactly perfect, it is important for video editors to maintain continuity. Jump cuts, changes in screen direction and other continuity errors can cripple your productions like Kryptonite. Good editors need to recognize such hazards and thwart their evil efforts in the edit bay. When it comes to editing, continuity is king.

Be selfless

Being a superhero is a thankless job. Think about it: These caped crusaders put forth immense effort and go to extreme lengths to save the planet again and again, yet the general public is oblivious to their work. Sure, one or two people know how it really happened, but most people never stop to recognize the men and women behind the masks. It's not about getting recognition, it's about doing what's best for humanity (or the program). Being an editor is, likewise, a thankless job. Good editors know this, and it makes them even better. Want to be a



better editor? Face the fact that your production is probably not about you. One of the great disciplines that all editors must learn is to edit for the tastes of a specific audience. Throughout the course of a year, you may edit one video for residents at a retirement facility, another for grade-school kids and a third for business people. Successful editors are able to lay aside their personal tastes and tailor their edits to match the preferences of each audience.

Cut it close

You may have noticed the precise timing that is common to most superheroes. For whatever reason, superheroes tend to cut it cavalry close. They always come to the rescue a split second before the rope breaks or the bomb detonates. They are never there early and never late, either. Keep this in mind when you edit your videos. If your edits aren't tight, they aren't right. The timing and pace of your edits should be tight enough to bounce a quarter off. This means taking the time to trim that extra frame or two.

Use your power for good

Probably the most important thing for both editors and superheroes is to use the power for good. Video editors have great power to alter the reality that viewers see on the screen and with this great power comes great responsibility. As an editor, you can manipulate the footage you edit to alter the perceptions of your audience. Little things, like changing sequences, omitting footage or taking shots out of context, can make the good appear to be evil and the evil appear to be good. In the end, in order for video to maintain its credibility with the public, it is essential that video editors commit themselves to truth, justice and integrity in the edit bay. ■

Chuck Peters is *Videomaker's* Managing Editor.

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